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REFRACTORY COATINGS BIBLIOGRAPHY

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## INTRODUCTION

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This document constitutes a bibliography of reports on the general subject of refractory inorganic materials and, particularly, coating materials for use at temperatures over about 2500° F. Subjects which are related to high temperature refractory inorganics have also been referenced. The purpose of this document is to assist the research, development and application engineering effort in this technical area. Though persons using this report are cautioned that many reports may be unavailable, they should be aware of those organizations and authors who are their compatriots. Through these reports and subsequent personal contacts, the worker in this area should be better able to contribute and advance the state-of-the-art without duplication of work.

This compilation of reports was initiated as a result of the First High-Temperature Inorganic Refractory Coatings Working Group Meeting held at the University of Dayton, Dayton, Ohio, on 28-29 October 1958. The bibliography has been maintained by the senior compiler, Daniel W. Gates, because of the wide interest in the subject of refractory inorganic materials: about 400 documents on the subject have been written since the first Working Group meeting in 1958.

The compilers of this report appreciate the assistance of many people who were associated with this literature search, particularly those who have attended and supported subsequent meetings of the Refractory Inorganic Materials Working Group. Though this bibliography might be more useful if reports were further indexed and cross-referenced, this would be better done by persons trained in this art.

AUTHOR

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1. Kelley, K. K.: "Contribution to the Data on Theoretical Metallurgy III. The Free Energies of Vaporization and Vapor Pressures of Inorganic Substances," U. S. Bureau of Mines Bulletin, 383 (1935).
2. Kelley, K. K.: "Contributions to the Data on Theoretical Metallurgy VIII. The Thermodynamic Properties of Metal Carbides and Nitrides," U. S. Bureau of Mines Bulletin, 407 (1935).
3. Kelley, K. K.: "Contributions to the Data on Theoretical Metallurgy V. Heats of Fusion of Inorganic Substances," U. S. Bureau of Mines Bulletin, 393 (1936).
4. "Refractories Bibliography, 1928-1937," American Ceramic Society (1937).
5. Lander, J. J. and Germer, L. H.: Metals Tech., 14, 2259 (1947).
6. Harvison, W. N., Moore, D. G. and Richmond, J. C.: "Ceramic Coatings for High-Temperature Protection of Steel," Journal of Research of the National Bureau of Standards, 38, 293-307, Research Paper RP 1773 (March 1947).
7. Bennett, D. G.: "Ceramic Coatings and Ceramic Bodies for Aircraft Power Systems," University of Illinois, Department of Ceramic Engineering (April 1947).
8. "Oxidation of Materials at High Temperatures," Metals and Graphites, Chemical Engineering Group, NAA, Inc. (September 1947).
9. Barbour, D. J., Schofield, H. Z., Austin, C. R. and Slyh, J. A.: "Combustion Chamber Liners, Materials of Construction, and Nozzles for Rocket Motors, and Testing of These Materials," Battelle Memorial Institute, Columbus, Ohio (May 1946 - February 1948).
10. Seifert, R. L.: "Spectral Emissivity and Total Emissivity," AEC Document, (MDDC-675) TIP U4439, Contract No. N-W-31-109, Document No. ENG-38 (February 1948).

11. Croxton, F. E.: "Bibliography on Powder Metallurgy with Emphasis on Porous Metals," AECD-2763 (April 2, 1948).
12. Woodward, W. H. and Bobrowsky, A. R.: "Experimental Investigation of Ceramic-Lined Combustion Chamber," NACA RM E7H20 (April 1948).
13. McRitchie, R. H. and Ault, N. N.: "Coatings for the Protection of Ceramic Bodies," Ohio State University, ASTIA Document No. AD 146 568 (July 1948).
14. Moore, D. G., Bolz, L. H. and Harrison, W. N.: "A Study of Ceramic Coatings for the High-Temperature Protection of Molybdenum," NACA TN No. 1626 (July 1948).
15. Luft, N. W.: "The Thermodynamic Properties of Some Metals and Their Oxides at High Temperatures," Explosives Research and Development Established Tech. Memo No. 14/M/48 (September 1948).
16. Kelley, K. K.: "Contributions to the Data on Theoretical Metallurgy X High Temperature Heat-Content, Heat-Capacity and Entropy Data for Inorganic Compounds," U. S. Bureau of Mines Bulletin, 476 (1949).
17. Partridge, J. H.: "Glass to Metal Seals," Society of Glass Technology, Sheffield, England (1949).
18. Bennett, D. G. and Beals, R. J.: "The Metal Protective and Radiation Suppressive Properties of Ceramic Paints CP44 and CP83," University of Illinois (January 25, 1949).
19. Blackburn, A. R., et al: "Fundamental Study and Equipment for Sintering and Testing of Cermet Bodies, I-III," Journal of the American Ceramic Society, 32, 3, pp. 81-98 (March 1949).
20. Bobrowsky, A. R.: "Survey of the Use of Refractories as Structural Materials in Continuous-Combustion Power Plants for Aircraft," American Ceramic Society Bulletin, 28, 3, 89-93.

21. "Ceramic Development at the National Advisory Committee for Aeronautics," Technical Data Digest, 14, 5 (March 1949).
22. "The Formation of Refractory Coatings by Vapor Deposition Methods," USAF Project Rand, The Rand Corp., Santa Monica, California (March 25, 1949).
23. Harrer, R. P.: "Developments in High Temperature Ceramics on Metals Steel Processing," (June 1949).
24. Lidman, W.G. and Bobrowsky, A.R.: "Correlation of Physical Properties of Ceramic Materials with Resistance to Thermal Shock," NACA TN 1918 (July 1949).
25. Mahon, J.F.: "Summary of Progress in the Investigation of Phase Relationships Between Metals and Oxides at High Temperatures - Summary Report," N. W. State College of Ceramics, Alfred, New York, U. S. Atomic Energy Commission, PB 107990 (July 1949).
26. "Applicability of Ceramics and Ceramals as Turbine-Blade Materials for the Newer Aircraft Power Plants," ASME Transactions, 71, 6 (August 1949).
27. Hamjian, H. J. and Lidman, W.H.: "Investigation of Bonding Between Metals and Ceramics I," NACA TN 1948 (Sept. 1949).
28. Bruckhart, W. L., et al: "Molybdenum Alloys and Protection by Cladding," Battelle Memorial Institute Report, Project Rand, R-200 (1950).
29. Kelley, K. K.: "Contributions to the Data on Theoretical Metallurgy IX. The Entropies of Inorganic Substances," U. S. Bureau of Mines Bulletin, 477 (1950).
30. Quill, L. L. (editor): The Chemistry and Metallurgy of Miscellaneous Materials - Thermodynamics, McGraw-Hill Book Co., New York (1950).

31. Skinner, G. B., Rickett, C. W. and Johnson, H. L.: "Thermal, Structural, Electrical, Magnetic and Other Physical Properties of Titanium, Zirconium, Hafnium, and Thorium and Their Simple Compounds, I. Ti, Its Hydrides, Oxides, Halides, Nitride, Carbide, and Alkaline Earth Titanates," Technical Report 102-AC 49/2-100-1, Contract No. W 33-038-ac 17721 (1950).
32. Johnson, P. D.: "Behavior of Refractory Oxides and Metals, Alone or in Combination, in Vacuo at High Temperature," Journal of the American Ceramic Society, 33, 168-171 (May 1950).
33. Garn, P. D., Beckett, C. W. and Johnson, H. L.: "Thermal and Physical Properties of Boron, Its Oxides and Nitrides," Ohio State University Technical Report (July 1950).
34. Hummel, F. A.: "Report on the Preparation and Physical Properties of Certain Refractory Materials," Pennsylvania State College Reports Nos. 9-14 and Summary (July 1950).
35. Krekeler, K.: "The Metallurgy of Metal Spraying," Berg-U Huttermann Monatsch, Austria, 95, No. 12, pp. 340-342 (1950).
36. "High Temperature Ceramic Coatings," Products Engineering, 22, 11, 177-179 (1951).
37. Hubbel, W. G.: "Ceramic Coated Exhaust Systems," Aircraft Production, XIII, 15, 351-362 (1951).
38. Kramer, W. J., Stevens, J. R. and Dennard, F.: "Review of the Refractory Sulfides, The Preparation of Cerium Monosulfide Ceramics," Ministry of Supply, Materials Research Division (M. M. R.) Report No. H4/52, H5/52 and H21/51 (1951).
39. Luckes, C. F., et al: "The Experimental Measurement of Thermal Conductivities, Specific Heats and Densities of Metallic, Transparent and Protective Materials," USAF Technical Report 6145, Parts I-III, February 1951, July 1952 and March 1954.

40. Reininger, H.: "Metal Spraying in Protective Gases," Metalloberflache, 5, 3, A-42 (March 1951)
41. Moore, D.G., Bolz, L.H., Pitts, J.W. and Harrison, W.N.: "Study of Chromium-Frit-Type Coatings for High Temperature Protection of Molybdenum," NACA TN No. 2422 (July 1951).
42. Meigering, J.L.: "The Oxidation of Heat Resistant Alloys in the Presence of Foreign Oxides," Phillips Tech-Review, 12, 8 (August 1951).
43. Koch, P.: "The Dependence of Crystal Size in Sprayed Metal Layers on Spraying Conditions," Metalloberflache, 5, 9, A-129 (September 1951).
44. Blackburn, A.R., et al: "Fundamental Study and Equipment for Sintering and Testing of Cermet Bodies V," Journal of the American Ceramic Society, 34, 11, 327-331 (November 1951).
45. Van Vorst, W.D. and Knapp, W.J.: "Some Semiempirical Methods for Estimating the Entropies of Oxides, Silicates and Titanates, and the Prediction of Reaction Equilibria and Yields," J. Am. Ceram. Soc., 34, 12, 384-387 (December 1951).
46. "The Constitutional Diagram of the CR-W System, " Inst. Metals Jnl., 80, 589-592 (Reprint) (1952).
47. Gurnick, R.S. and Cooper, A.L.: "Infiltration of Titanium Carbide with Several Metals," NACA Rpt. RM E52E27 (1952).
48. Herz, W.H.: "Investigation of Various Properties of NiAl," WADC Rpt. 52-291, Part (1952).
49. Kramer, W.J., Stevens, J.R. and Dennard, F.: "Review of the Refractory Sulfides, The Preparation of Cerium Monosulfide Ceramics," Ministry of Supply, Materials Research Division (M.M.R.) Report No. H4/52, H5/52 and H21/51 (1952).

50. Tammann, G. and Koster, W.: "Velocity of Action of Oxygen, Hydrogen Sulfide and Halogens on Metals," NACA TM 1339 (1952).
51. Sayee, S.: "Development of Fused Metal Coatings," Welding Journal, 35-39 (January 1952).
52. Maxwell, W. A.: "Some Factors Affecting Fabrication and High-Temperature Strength of Molybdenum Disilicide," NACA RM E52B06 (April 1952).
53. Long, J. V.: "Ceramic Coatings," Machine Design, 122-126 (May 1952).
54. Reininger, H.: "Flame Spraying Non-Metallic Coatings onto Metal Surfaces," Metalloberfläche, 6, 5, A-71-76 (May 1952).
55. Whitfield, M.G. and Sheshnoff, V.: "Aluminized Coatings," Machine Design, 139-140 (May 1952).
56. Coffin, L.F. Jr.: "A Note on Cemented Tungsten Carbide as a Bearing Material," KAPL-M-LFC-3, Knolls Atomic Power Laboratory (July 1952).
57. Luckes, C.F., et al: "The Experimental Measurement of Thermal Conductivities, Specific Heats and Densities of Metallic, Transparent and Protective Materials," USAF Tech Rpt. 6145, Parts I-III, February 1951, July 1952, and March 1954 (July 1952).
58. Harman, C.G. and Durbin, E.A.: "An Appraisal of the Sintering Behavior and Thermal Expansion of Some Columbates," BMI-791 (December 15, 1952).
59. Kluz, S., Kalinowski, C. and Wehrmann, R.: "Study and Research of Siliconizing of Titanium," Contract DA-11-022-ORD-1069, Fansteel Metallurgical Corp., ASTIA AD 785 (December 1952).
60. Alliegro, F.A.: "Methods of Producing Self-Bonded and Metal-Bonded Silicon," WADC Contract No. AF 33(038)-16190, Rpt. No. 6 (1953).

61. Brewer, L.: "The Thermodynamic Properties of the Oxides and Their Vaporization Processes," Chem. Rev., 52, 1-75 (1953).
62. "Diffusion Coating," Properties of Metallic Surfaces, The Institute of Metals, London (1953).
63. Donnelly, W.I.: "Carbide Flame-Plating," American Society of Tool Engineers, Tech Papers and Panel Discussion, Vol. 21 (1953).
64. Hauffe, K.: "The Mechanism of Oxidation of Metals and Alloys at High Temperatures," Progress in Metal Physics, 4, Interscience Publishers, New York (1953).
65. Hopkins, B.E. and Kubaschewski, O.: Oxidation of Metals and Alloys, Academic Press Inc., New York (1953).
66. Mong, L.E., et al: "Development of Ceramic Flameholders for After burners and Ramjets," National Bureau of Standards, Rpt. 2652 (1953).
67. Moore, D.G. and Mason, M.A.: "Investigation of Gases Evolved During Firing of Vitreous Coatings on Steel," NACA TN 2865 (1953).
68. Schwartzkopf, P. and Keiffer, R.: Refractory Hard Metals, The MacMillan Co., New York (1953).
69. Strauss, S.W., Richards, L.E. and Moore, D.G.: "Effect of Temperature on the Electrical Resistivity of Several Ceramic and Silicone-Type Coatings," Special Tech publication No. 153, Symposium on Porcelain Enamels and Ceramic Coatings as Engineering Materials, ASTM (1953).
70. Economos, G.: "Behavior of Refractory Oxides in Contact with Metals at High Temperatures," Ind. and Eng. Chem. (February 1953).
71. "High Temperature Oxidation Prevented by Sprayed Aluminum," Aluminum and Electropating, 74 (February 1953).

72. King, R. M., Brinkman, R. J. and Watkins, W. E.: "Resistance to Continued Heating of Powdered Cover Coats Applied to Enameling Iron and Ferritic Alloy," WADC Rpt. 53-170, Ohio State University Research Foundation (March 1953).
73. Martini, W. R.: "A Compilation of Vapor Pressure Data for the Elements from Br to U, and Their Oxides and Carbides," NAA-SR - 215 (March 20, 1953).
74. Arbiter, W.: "New High Temperature Intermetallic Materials," WADC Tech Rpt. 53-190, WADD (May 1953).
75. Saller, H. A., et al: "Bismuth Alloy Coatings on Aluminum," BMI 835 (May 28, 1953).
76. Mansen, S. S.: "Behavior of Materials Under Conditions of Thermal Stress," NACA TN 2933 (June 1953).
77. Graft, J. C.: "Optimum Coating Thickness of Ceramic Coated Nose Cone," Rpt. No. 6M91, Redstone Arsenal (OML), Ala. (August 1953).
78. McDermott, W. and Dickinson, R.: "The Influence of Fuel Gases on the Spraying of Metal Powders," Electroplating and Metal Spraying, 309-313 (August 1953).
79. Williams, L. I. S. and Murray, P.: "Bonding in Cermets," AERE M/R 1242 (August 21, 1953).
80. Dunkin, A. E. and Horner, A. H.: "Silicone Aluminum Paints for High Temperature," Materials and Methods, 114-116 (September 1, 1953).
81. Glaser, F. W. and Post, B.: "Zirconium-Boron System," Joun. of Metals, 1117-1118, Trans. AIME (September 1953).
82. Barr, H. H., et al: "Application of Fundamental Concepts of Bonding Metals and Ceramics," WADC Tech Rpt. 53-336 (October 1953).
- 82a. King, B. W., Blankenship, C. L., Tripp, H. P., and Duckworth, W. H. "Properties of Molybdenum Disilicide," BMI-871 (September 25, 1953)

83. Stavrolakis, J.A., Barr, H.J., Marchi, L., Rice, H.H.: WADC Technical Rpt. 53-356 (October 1953).
84. "Selecting Ceramic Coatings," Materials and Methods, 116-119 (December 1953).
85. Arbiter, W.: "Evaluation of High Temperature Materials," Prog. Rpt. No. 7, Contract No. AF 33(616)-109 (1954).
86. Bell, W.C.: "Vibratory Compacting of Metal and Ceramic Powders," WADC Contract AF 33(616)-73, Rpt. No. 9 (1954).
87. Coughlin, J.P.: "Contributions to the Data on Theoretical Metallurgy XII. Heats and Free Energies of Formation of Inorganic Oxides," USBM Bulletin 542 (1954).
88. Heindl, R.A.: "Ceramic Flameholders for Afterburners and Ramjets," NBS Rpt. 3446 (1954).
89. Hoening, C.L., et al: "High Temperature Resistant Ceramic Coatings, Ceramic and Metal Ceramic Bodies," Contract No. AF 33(616)-2307 (1954).
90. King, R.L.: "Ceramic Coatings for Metals," Contract No. AF 33(616)-499 (1953-1954).
91. King, R.M.: "Factors Contributing to the Protection of Metals by Inorganic Non-metallic Materials," Contract No. DA 33019 and 878 (1954).
92. Lynch, J.F., et al: "Molybdenum Disilicide Coating for Graphite," WADC Rpt. 53-457 (1954).
93. Montgomery, E.T., et al: "Cermet Coatings for Gas Turbines," Dept. of the Navy, Summary Report of Contract bs 62161 (1954).
94. Newkirk, H.W., Sherlin, T.S. and Hauck, C.A.: "Study of Microstructure of Cermets," Contract No. AF 33(038)-16911 (1954).

95. Plankenhorn, W. J. and Bennett, D. G.: "The Effect of Ceramic Coatings on the Stress Rupture Characteristics of Stainless Steel Type 321," Contract No. W33(038) dc 14520 (1954).
96. Reiminger, H.: "Further Development of Metal Spraying Technique," Metalloberfläche, Ausgabe B, 73-75 (1954).
97. Smiley, W. D.: "Investigation of Carbon Graphite Based Materials Suitable for Rocket and Ramjet Applications," Contract No. AF 33(616)-2023 (1954).
98. Sckman, E. J.: "An Investigation of a Method of Coating Alloy Titanium Carbide Cermets," WADC TR 53-270 (1954).
99. Sully, A. H.: "Chromizing," Chromium, Academic Press, Inc., New York (1954).
100. "Symposium on Porcelain Enamels and Ceramic Coatings on Engineering Materials," ASTM (1954).
101. Trostel, L. J.: "Ceramics-Fiber Base Cermets," WADC Rpt. 54-172 (1954).
102. Turnbull, R. C.: "Study of the Basic Mechanism of Diffusion of Metals into Ceramic Materials," Contract No. AF 18(600)-591 (1954).
103. Wachtell, R. L. and Seelig, R. P.: "Chromizing of Titanium Carbide Cermets," WADC Rpt. 54-329 (1954).
104. Weir, A., Jr. and Morrison, R. B.: "Basic Research on Ceramic Combustion Chambers," DA Contract No. DA-20-018-ORD-12300 (1954).
105. Williams, L. I. S. and Murray, P.: "Bonding in Cermets," Metallurgia, 49, 295, 210-217 (1954).
106. Wilson, R. E.: "Methods of Producing Self-Bonded and Metal-Bonded Silicon Carbide," WADC Contract No. AF 33(038)-16190, Rpt. No. 7 (1954).

107. Wilson, R.E.: "Methods of Producing Self-Bonded and Metal-Bonded Silicon Carbide," WADC Rpt. No. 8, Contract No. AF 33 (038)-16190 (1954).
108. De Paauw, D.: "Porosity of Sprayed Coating," Electroplating and Metal Spraying, Parts 1-4 (November 1953, pp. 435-438; December 1953, pp. 475-476; January 1954, pp. 36-38).
109. Sidles, P.H. and Danielson, G.C.: "Thermal Diffusivity of Metals at High Temperatures," Journal of Applied Physics, pp. 58-66 (January 1954).
110. Sully, A.H.: "Special Coatings for Metals Used at High Temperatures," Product Engineering, pp. 135-141 (January 1954).
111. Ferguson, R.L.: "A Further Investigation of the Effect of Surface Finish on Fatigue Properties at Elevated Temperatures," NACA TN 3142 (March 1954).
112. Luckes, C.F., et al: "The Experimental Measurements of Thermal Conductivities, Specific Heats and Densities of Metallic, Transparent and Protective Materials," AF Tech Rpt. 6145, Parts I-III (February 1951, July 1952, March 1954).
113. King, B.W.: Ceramic Coated Metals for Industry," Battelle Tech Rev., pp. 39-43 (April 1954).
114. Gogolick, R.M.: "Study of the Electromechanical, Dielectric, and Ceramic Properties of Ferroelectric Sodium Cadmium Niobate," Contract No. NONR 770(00), NR 385-408, Final Rpt. (May 28, 1954).
115. Knudson, F.P., et al: "Physical Characteristics of Titanium Carbide Base Cermets at Elevated Temperatures," WADC Tech Rpt. 54-1 (May 1954).
116. Marshall, D. and Bennett, D.G.: "The Effects of Pre-Compression on the Thermal Shock Resistance of Pure Oxide Ceramics," WADC Tech Rpt. 54-27 (May 1954).

117. Tanaka, H. and Kato, K.: "Ceramic Coating: Protective Characteristics of Ceramic Coating Against Oxidation, Carbon Absorption, and Corrosive Gasses and Vapors," Osaka Kogyo Gijutsu Shikenjo Kiho, 5, 91-94 (May 1954).
118. Fansteel Metallurgical Corp.: "Development of a Protective Coating for Titanium Alloys," D A Contract No. DA-11-022-ORN-1069, Final Rpt. (June 1954).
119. Holgate, S. M.: "Spraywelding," Electroplating and Metal Spraying, 239-245 (June 1954).
120. American Electrometal Corp.: "Cemented Borides," Contract N6-ONR-256, Summary Progress Rpt., (1 June 1954 to 31 July 1954).
121. Thielke, N. R.: "Refractory Materials for Use in High Temperature Area of Aircraft," WADC Tech Rpt. 54-467 (July 1954).
122. Everhart, J. L.: "New Refractory Hard Metals," Materials and Methods, 90-92 (August 1954).
123. "Flame Plating Process," Steel, 67 (August 1954).
124. Matting, A. and Becker, K.: "Investigation Into the Metal Spraying Process," Engineers' Digest, 309-314 (August 1954).
125. Bennett, D. G. and Plankenhorn, W. J.: "The Effect of Ceramic Coatings on the Stress Rupture Characteristics of Stainless Steel Type 321," USAF Contract No. AF 33(068)-2307 (September 1954).
126. Bobrowsky, A. R., Hunter, T. A., and Thomas, L. L.: "Thermal-Shock Investigation," WADC Technical Rpt. 54-206 (September 1954).
127. Brinkman, R. J.: Ceramic Coating Conference 27 and 28 May 1952," WADC Tech Rpt 53-37 (September 1954).
128. Hunter, T. A., et al: "Thermal-Shock Investigation," WADC Tech Rpt. 54-206 (September 1954).
129. Kenper, M. J. et al: "Evaluations of Tests for Cermets as Components of Heat Resistant Materials," NBS Rpt. 3704 (30 September 1954).

130. King, B. W.: "Properties of Ceramic Coated Metals," Materials and Methods, 104-106 (September 1954).
131. Plankenhorn, W. J. and Bennett, D. G.: "Effect of Ceramic Coatings on the Fatigue Strength of Stainless Steel," US AF Contract No. W33(038) dc 14520, Final Rpt. (September 1954).
132. Herzig, A. J. and Blanchard, J. R.: "Protecting Molybdenum from Oxidation," Metal Progress, 109-114 (October 1954).
133. King, B. W.: "Properties of Ceramic Coated Metals," Materials and Methods, 105-106 (October 1954).
134. Miller, R. C. Jr. and Brunot, A. W.: "Surface Preparation and Fatigue in Metal Spraying," Electroplating and Metal Spraying, 393-397 (October 1954).
135. Shevlin, T. H. et al: "Cermet Coating Development," Contract No. bs 62161, Annual Summary Rpt. (1 October 1954).
136. Hansen, M., McPherson, D. J. and Rostaker, W.: "Exploration of Vanadium-Base Alloys," WADC Technical Report 52-145, Parts I and II (July 1952 and November 1954) respectively.
137. Heck, F. W., Ferriss, D. P. and Comstock, G. J.: "Navy Project for Investigation of Hot Coined Cermet Coatings, Refractory and Resistant to Oil Ask Corrosion," Contract No. NObs-66061, First Summary Rpt. (1 August to 1 November 1954).
138. Blanchard, J. R.: "Oxidation-Resistant Coatings for Molybdenum," WADC Tech Rpt. 54-492, Climax Molybdenum Co. (December 1954).
139. Campbell, J. B.: "Clad and Precoated Metals," Materials and Methods Manual III (December 1954).
140. Cowen, J. M.: "Adhesion and Surface Preparation in Protective Metal Spraying," Electroplating and Metal Spraying (Feburary 1954, pp. 79-82, March 1954, pp. 117-122, December 1954).
141. Johnson, A. E. Jr.: "Mechanical Properties at Room Temperature of Four Cermets of Tungsten Carbide with Cobalt Binder," NACA TN 3309 (December 1954).

142. Joseph, A. D., Scheffer, K. D., Riegert, R. P. and Tinklepaugh, J. R.: "The Heat-Treatment, Reinforcement, and Cladding of Titanium Carbide Cermets," WADC Tech Rpt. 55-82, Power Plant Lab Contract No. AF 33(616)-2414, The New York State College of Ceramics, Alfred University (December 1954).
143. Olsen, L. O. and Walker, R. F.: "An Evaluation of Ceramic Materials for Application as Flameholders," WADC Technical Report 54-234 (December, 1954).
144. Smoke, E. J.: "High Thermal Shock Ceramics," AD 13 154 (Contract Nr DA 36-039-SC-42577) (Rutgers Univ., New Brunswick, New Jersey) (December 1954).
145. Accountius, D. E. et al: "Study of the Systems TiC-SiC-B<sub>4</sub>C and TiC-VC-ZrC," WADC Rept No. 53-287 (1955).
146. Garner, W. E.: Chemistry of the Solid State, Academic Press Inc., New York (1955)
147. Grimley, T. B.: "Oxidation of Metals," Chemistry of the Solid State, Academic Press, Inc., New York (1955)
148. Lauchner, J. H.: "The Relation of Stress and Strain to Processing of Enamels," Porcelain Enamel Inst Forum, 17, 91-97 (1955)
149. Moskowitz, D.: "Cemented Borides," Office of Naval Research Contract No. N6-ONR-256/1, Summary Rpt. (1955) See also No. 232
150. Powell, C. F., Campbell, I. E. and Gonser, B. W.: "Vapor-Plating," John Wiley and Sons Inc., New York (1955)
151. Rawson, H.: "A Note on Oxidation Resistant Coatings on Molybdenum and their Use in Glass Seals in Mercury Lamps," Jour of the Soc of Glass Technology, 39, 211 (1955)
152. Samsonov, O. V. and Latzscheva, V. P.: "Compounds of Boron and Silicon," Dokl. Akad Nauk., 105, 499 (1955)
153. Schrader, A. R.: "Investigation of Factors Affecting the Performance of Ceramic Coatings in Wet Exhaust Muffler Service," US Naval Eng Exp Station Rpt. 020022B (1955)
154. Calhoon, H. P. and Christiansen, C. J.: "Effect of Temperature and Additives on the Creep Properties and Recrystallization of Aluminum Oxide," Contract No XLII, U of Utah (15 Jan 1955)

155. "Fundamental Properties of Metal-Ceramic Mixtures at High Temperature," PB 121413, US Dept Commerce, Office of Tech Services (January 1955)
156. Kingery, W. D. and Norton, F. H.: "The Measurement of Thermal Conductivity of Refractory Materials," USAEC NYO-6449 (January 1955)
157. Kingery, W. D.: "Factors Affecting Thermal Stress Resistance," Jour Amer Ceramic Soc, 3-15 (January 1955)
158. Reininger, H.: "Flame Spraying of Non-Metallic Protective Layers on Metal Surfaces," Metalloberfläche Ausgabe A, 9, No. 1, 6-9 (January 1955)
159. Brogdon, T. A.: "Evaluation of Cermets for Jet Engine Turbine Blading," WADC Tech Rpt. 55-215 (January 1955)
160. Kingery, W. D., Buessem, W. R., Manson, S. S., Smith, R. W., Bush, E. A., Coble, R. L., Baroody, E. M., Simons, E. M., Duckworth, W. H., Crandall, W. B., and Ging, J.: "Thermal Shock," (A compilation of articles) Jour Amer Ceramic Soc, 38, No. 1 1-54 (January 1955)
161. Rostaker, W. and Yamamoto, A. S.: "Exploration of Vanadium-Base Alloys," WADC Technical Report 52-145, Part III (January 1955)
162. Rose, K.: "New Solutions Ceramic Coatings," Materials and Methods, 107-108 (February 1955)
163. Trostel, L. J.: "Ceramic Fiber Base Cermets," WADC 54-172 (February 1955)
164. Hoenig, C. L., Roesch, B. D., Willmore, T. A. and Bennett, D. G.: "High Temperature Resistant Ceramic Coatings, Ceramic and Metal-Ceramic Bodies," WADC Power Plant Lab, Contract No AF 33(616)-2307, RDO No. 506-67, Quart Prog Rpt No. 4, U of Illinois (26 March 1955)
165. Riley, M. W.: "New Flame Sprayed Ceramics," Materials and Methods, 42, No. 3, 96-98 (March 1955)
166. Glaser, F. W.: "Progress Report on Ceramics," Metals Prog, 67 (Reprint) (April 1955)

167. Lauchner, J. H., Cook, R. L. and Andrews, A. I.: "A New Technique for Simultaneous Recording of Strains and Temperature in Enamel-Metal Systems," Bull Amer Cer Soc 34(4) 105-108 (April 1955)
168. Roper, E. H.: "An Improved Method of Oxy-Fuel Combustion," The Welding Journal, 329-336 (April 1955)
169. Tour, S.: "Fused in Place Spray Metallized Coatings," The Welding Journal, 329-336 (April 1955)
170. Beach, J. G. and Faust, C. L.: "Electroplated Metals on Niobium," Battelle Memorial Inst Rpt. 1004, USAEC (24 May 1955)
171. Blanchard, J. R.: "Oxidation-Resistant Coatings for Molybdenum," WADC Tech Rpt. 54-492, Part II, Climax Molybdenum Co. (June 1955)
172. Duckworth, W. H. and Krochmal, J. J.: "Ceramics for Rockets," Ordnance, 997-1001 (May and June 1955)
173. Binder, I. and Moskowitz, D.: "Cemented Borides," US Off Naval Res, PB 121346, Amer Electrometals Corp (July 1955)
174. Porter, H. B.: "Rocket Refractories," US Nav Ord Test Station Rpt NAVORD 4893, ASTIA NR AD 95 483 (August 1955)
175. "Minutes of the 19th Meeting, Committee on Molybdenum," Office of Naval Research Advisory Committee (Sept 1955)
176. Suber, L. L. and King, B. W.: "Some Properties of the Oxides of Vanadium and Their Compounds," J. Am. Ceramic. Soc., 38 (9), 306-311 (September 1955)
177. Sheyne, J. J.: "Electrophoretic Deposition of Metallic and Composite Coatings," Plating 55-1255 (October 1955)
178. Metcalfe, E. G. and Sump, C. H.: "Fiber Metals - A New Metal Form," Materials and Methods, 96-98 (Nov 1955)
179. Bennett, Dwright G.: "High Temperature Coatings," PEI Shop Practice, Ceramic Age, 66, No. 6, 24 (24 December 1955)
180. Bradstreet, S. W.: "Solution Ceramics for Enameling," PEI Shop Practice Papers, Ceramic Age, 66, No. 6, 24-27 (December 1955)

181. Kattus, J. R.: "Tensile, Fracture, and Short Time Creep Properties of Aircraft-Structual Materials at Ver High Temperatures after Rapid Heating," WADC TR 55-391 (Southern Research Institute) (December 1955)
182. Mauer, F. A. and Bolz, L. H.: "Thermal Expansion of Cermet Components," AF Contract No. 33(616)-565, ASTIA Nr AD 86 384, NBS Rpt. 4540, Progress Report 10 (15 September-15 December 1955)
183. Shevlin, T. S. and Hauck, C. A.: "Fundamental Study and Equipment for Sintering and Testing of Cermet Bodies, VII," Jour Amer Ceramic Soc, 38, No. 12, 450-454 (December 1955)
184. Tripp H. P. and King, B. W.: "Thermodynamic Data on Oxides at Elevated Temperatures," Jour Amer Ceramic Soc, 38, No. 12, 432-437 (December 1955)
185. Campbell, I. E. ed.: High Temperature Technology, John Wiley and Sons Inc., New York (1956)
186. Eliotin, V. P. and Funke, V. F.: "On the System Chromium-Niobium," IZW Akad Nauk, USSR Techn, No. 3, 68-78 (1956)
187. Engberg, C. J., and Zehms, E. H.: "Thermal Expansion of  $\text{Al}_2\text{O}_3$ , BeO, MgO, B<sub>4</sub>C, SiC and TiC above 1000 C," J. Am. Ceram. Soc. 42, (6), 300-305 (June 1959)
188. Epstein, S. E. et al: "Bibliography and Structure of Binary Intermetallic Compounds," AEC Rpt ISC-795 (1956)
189. Fieldhouse, I. B.: "Measurement of Thermal Properties," WADC Tech Rpt 55-495 (1956)
190. Friedemann, H. C.: "Development of Cermets, 1950-1956 (Bibliography)," Nuclear Engineering Division, Penn-Texas Corp., New York (1956)
191. Gschneider, K. A. et al: "Bibliography and Structure of Binary Intermetallic Compounds," AEC Rpt. ISC-795 (1956)
192. Gulbransen, E. A.: "Role of Minor Elements in the Oxidation of Metals," Corrosion, 637t-643t (1956)
193. Koenig, J. H.: "Improved Ceramics," Signal Corps Rpt No VIII, Contract No. DA-36-039-ac-64566 ASTIA Doc AD 141 608 (1956)

194. Kubaschewski, O. and Evans: "Metallurgical Thermochemistry," Pergamon Press, New York (1956)
195. Lachance, M. H. and Jaffee, R. I.: Fabrication and Evaluation of Thin Clad Sheets of Molybdenum," Trans Amer Soc of Metals, 48, 595-620 (1956)
196. Leven, E. M. et al: "Bibliography and Structure of Binary Intermetallic Compounds, Part II," AEC Rpt. ISC-812 (1956)
197. Mitchell, L.: "Ceramics as Structural Materials," Industrial and Engineering Chemistry, 48, (1956)
198. Northcott, L.: "The Oxidation and Protection of Molybdenum," Molybdenum, Academic Press, Inc., New York, 157-189 (1956)
199. Rose, K.: "New Aluminized Coating," Materials and Methods, 104-105 (1956)
200. Samsonov, O. V. and Rozinova, N. S.: "Some Physico-Chemical Properties of Zirconium-Carbon Alloys," IZW Sect Fiz Anal, 27 126-131 (1956)
201. Samsonov, O. V. and Grodstein, A. E.: "On Some Properties of the Hexaborides of the Rare Earth Metals," Zur Fiz Chim Anal, 30 370-381 (1956)
202. Schaer, G. R. and Safranek, W. H.: "Properties of Electrodeposits at Elevated Temperatures," Forty-Third Annual Technical Proceedings, American Electroplaters' Society (1956)
203. "Strain Rate Effects in Tungsten," Transactions of the Amer Inst of Mining, Metallurgical and Petroleum Engineering (1956)
204. Eshelman, R. H.: "Plating with Carbide," Tool Engineer, 36, No 1, 117-122 (January 1956)
205. Eubanks, A. G. and Moore, D. G.: "Development of Erosion-Resistant Coatings for Aircraft Engine Components," WADC Tech Rpt 56-129, Power Plant Lab Contract No AF 33-(616)-55-2, N B S (January 1956)
206. Fabian, R. J.: "Hard Coatings and Surfaces for Metals," Material and Methods, Manual 134 (January 1956)

207. Johnson, R. L. et al: "Wear of Materials for High Temperature Dynamic Seals," Paper No. 686, SAE Ann Meeting, Detroit, Mich. (9-13 January 1956)
208. Lucks, C. F. and Deem, H. W.: "Thermal Conductivity, Heat Capacity, and Linear Thermal Expansion of Five Materials (Cu, Cr, Mo, GBH and 7087 Graphite)," WADC TR 55-496 Pts I, II (Battelle Memorial Institute, Columbus, Ohio) (18 January 1956)
209. Pennington, J. W. et al: "High-Speed-High Temperature Shaft Seals," Paper No. 687, SAE Annual Meeting, Detroit, Mich. (9-13 January 1956)
210. "Refractory Molybdenum Silicides," Bulletin Cdb-6, Climax Molybdenum Co., New York (January 1956)
211. Archarov, V. I. and Kozmanov, Y. D.: "High Temperature Oxidation of Tungsten," Fiz Metall Metalloved, 2, 361-369 (February 1956)
212. Archarov, V. I. and Kozmanov, Y. D.: "The Oxidation of Molybdenum above the Melting Point of Molybdenum," Fiz Metall Metalloved, 2, 566 (February 1956)
213. Crandall, W. B. and West, R. R.: "Oxidation Study of Cobalt-Alumina Mixtures," Amer Cer Society Bull, 35, No 2, 66-70 (February 1956)
214. Douglas, F. A.: "Investigation Directed Toward the Development of Ceramic Coatings with High Reflectivities and Emissivities for Use in Aircraft Power Plants," WADC Tech Rept 56-110, The Bettinger Corp. (February 1956)
215. "At 1600° - Try Molybdenum Disilicide," Materials and Methods, 46, No. 2, 131-133 (February 1956)
216. Stavrolakis, J. A. et al: "Investigation of Boride Cermets," Amer Ceramic Soc Bull, 35, No. 2, 47-52 (February 1956)
217. Teter, M. A.: "Flame Plated Coatings," Materials and Methods, 43, No. 2, 100-102 (February 1956)
218. Walker, Grand and Miller: "High Temperature Heat Content and Heat Capacity of Alumina and Molybdenum Silicate," Jour Phys Chem, 60, 231-233 (February 1956)

219. Smoke, E. J. and Koenig, J. H.: "Ceramic Materials," Machine Design (reprint) (22 March 1956)
220. Trostel, L. J.: "Ceramic Fiber Base Cermets, Part III," WADC Tech Rpt 54-172, ASTIA AD 99 184 (March 1956)
221. "Characteristics of Refractory Oxide Coatings Produced by Flame Spraying," Norton Co., Worcester, Mass. (April 1956)
222. Cuthill, J. R. and Harrison, W. N.: "Erosion Protection for Aircraft Components," WADC Tech Rpt No. 56-130, Power Plant Lab Contract No. AMC 33-(600) 52-4210, N B S (April 1956)
223. Hinüber, J. et al: "Oxidation of Carbide Alloys for High Temperature Purposes," Archiv fur das Eisenhuttenwesen, 27, 4, 259-276 (April 1956)
224. Kramer, F.: "Aerodynamic Skin Heating - A Structural Materials Problem," Rpt No. 6R4F, Redstone Arsenal, Alabama (April 1956)
225. Norton, J. T.: "Selecting Cermets for High Temperature Applications," Machine Design, 28, 1, 143-148 (April 1956)
226. Norton, J. T.: "Cermets for High Temperature Service," Mechanical Engineering, 78, 319-322 (April 1956)
227. Smoke, E. J. and Koenig, J. H.: "Ceramics as Basic Engineering Materials," Mechanical Engineering, 78, 315-318 (April 1956)
228. Jackson, L. R.: "Material Properties for Design of Airframe Structures to Operate at High Temperature," Rpt No. 38, Marquardt Aircraft Co. (May 1956)
229. Skalrew, S.: "Insulation Type Refractory Coatings," MAC No 5578, Marquardt Aircraft Co. (May 1956)
230. Tashenberg, E. J.: "Evaluation of Designs and Materials for High Speed-High Temperature Shaft Seals for Turbojet Engine Applications," WADD Tech Rpt 56-267, ASTIA No 110636 (15 May 1956)
231. "High Temperature-A Tool for the Future," Stanford Institute Symposium, Menlo Park, Calif. (25-27 June 1956)
232. Binder, I. and Moskowitz, D.: "Cemented Borides," Progress Rpt Contract N6-ONR-256/1, ASTIA NR 101 583 Amer. Electrometals Corp. (July 1956)

233. Fryberg, Datz and Simon: "Effect of Phosphate Coatings on Temperature of Metal Parts Exposed to Flame Enviroments," NACA Tech Note 3279, Lewis Flight Prop. Lab (July 1956)
234. King, B. W., Schultz, J., Durbin, E. A. and Duckworth, W. H.: "Some Properties of Tantala Systems, BMI-1106 (July 9, 1956)
235. Lauchner, J. H., Cook, R. L. and Andrews, A. I.: "Fundamental Thermal Deflection Analysis of Enamel-Metal Systems," Jour Amer Cer Soc 39 (8) 288-292 (August 1956)
236. Spriggs, R. M., Lefort, H. G. and Bennett, D. G.: "Elevated Temperature Resistant Ceramic Structural Adhesive," WADC Rpt 55-491, ASTIA NR AD 97316, Ceramics Dept., U of Illinois (September 1956)
237. "Process Improvement Study for Aluminizing by Ceramic Technique," Interim Rpt No 1, Solar Aircraft Co Research Div. (October 1956)
238. Coble, R. L. and Kingery, W. D.: "Effect of Porosity on Physical Properties of Sintered Alumina," Jour Amer Cer Cos, 39, No 11, 377-385 (November 1956)
239. Dunegan, H. C.: "A Study of Methods of Producing a Ceramic to Metal Seal by Pressed Powder Techniques for Automatic Mass Production," Contract No AF 33(600)-27329, Amer Lava Corp., Div of 3M, Chattanooga, Tenn. (30 November 1956)
240. Ault, N. N. and Whittemore, O. J.: "Thermal Expansion of Various Ceramic Materials to 1500 C," J. Am Ceram. Soc. 39, No. 12, 443-444 (December 1956)
241. Harwood, J. J.: "Protecting Molybdenum at High Temperatures," Materials and Methods, 85-89 (December 1956)
242. "Ceramic Coatings for Aircraft Parts," NBS Rpt to NACA, NBS No. 5475, Project 0904-11-4412, NACA No. W-6606,S58-25 (1957)
243. Douglas, T., Victor, A. C., Flueger, H. W. Jr., and Jennings, O. C.: "Physical Properties of High Temperature Materials, Parts II & III," WADC TR 57-374, N B S (1957)
244. Fieldhouse, I. B.: "Thermal Properties of High Temperature Materials," WADC TR 57-487, Armour Res Found, Chicago, Illinois Rpt No 3701 (1957)

245. Gatewood, B. E.: Thermal Stresses, McGraw-Hill Book Co., New York (1957)
246. Gegley, R. T.: "Coated Molybdenum Base Alloys," Society of Automotive Engineers Jour, 65, (1957)
247. Glassner, A.: "The Thermochemical Properties of the Oxides, Fluorides and Chlorides to 2500° K," AEC ANL-5750 (1957)
248. Lang, J. I.: "Density and Heat Capacity of Liquid Copper," WADC TR 57-488, Armour Res Found, Chicago, Illinois (1957)
249. Nowotny, H.: "Investigation on High Melting Silicon-Borides of the Transition Metals," No 16, Congress for Pure and Applied Chemie, Paris, France (1957)
250. Nowotny, H. et al: "Contributions to the Systems UC-TiC, ZrC-VC, NbC,-Cr<sub>2</sub>C<sub>2</sub>,-Mo<sub>2</sub>C and WC," Mh Chemie, 88, 336-343 (1957)
251. Nowotny, H. and Huschka, H.: "Investigation in the Partial Systems of Al-TiSi<sub>2</sub>, -ZrSi<sub>2</sub>, -Mo<sub>2</sub>Si<sub>2</sub> and -WSi<sub>2</sub>," Mh Chemie, 88, 494-501 (1957)
252. Pezzi, A.C. and Kling, H. P.: "Improvement of the Impact Resistance of Cermets," WADC Rpt 56-329 (1957)
253. Pfeiffer, H.: "The Influence of Trace Elements on the Scaling of Heat-Resistant Alloys," Werkstoffe, u. Korrosion, 8 (10), 574-579 (1957)
254. Plate, W. and Raub, E.: "The Behavior, With Respect to Oxygen, of Noble Metals and Their Alloys in the Solid State at Elevated Temperatures," Zeitschrift für Metallkunde, 48 (10) 529-539 (1957)
255. Robins, L. and Grola, E. M.: "Effect of Surfact Treatment on the Strength of Titanium Carbide-30% Nickel Cermet," NACA Rpt 3927 (1957)
256. Siebel, R. D.: "Thermal Properties of High Temperature Materials," WADC TR 57-468, Denver Research Inst, Denver, Colo. (1957)
257. Lindenthal, J. W., Stradley, J. G., and Shelvin, T. F.: "Alumina-Base Cermets, Part 4," ASTIA NR 130849, Ohio State Univ Res Foundation, Columbus, Ohio, WADC TR 54-173 (January 1957)
258. "Metals for Supersonic Aircraft and Missiles," Amer Soc for Metals, Cleveland Ohio (January 1957)

259. Trapp, R. F.: "Analysis of Thermal Properties of Plastic Laminates, Cores and Sandwich Panels,  $\Delta L/L$ ,  $C_p$ ,  $k$  of polyesters, phenolics, silicones and isocyanate cores," WADC TR 56-543, Southern Research Inst, Birmingham, Alabama (January 1957)
260. Cuthill, J. R. and Dixon, R. W.: "Diffusion of Hydrogen Through Ceramic-Coated Nickel," Metal Products, 14, No. 2, 27-102 (February 1957)
261. "Deceleration and Heating of a Body Entering a Planetary Atmosphere from Space," Rand Corp, Santa Monica, Calif. (February 1957)
262. "Fibered Materials for Flight Structures," ASTIA NR 123538 (February 1957)
263. Iskak Idsku, I. I. and Bozorodskaya, L. P.: "Possibility of Preparing Cermets Based on Chromium, Titanium, and Tungsten Borides," Zhurnal prikladnoi khimii, 30, No 1, 177-185 (February 1957)
264. "Problems of Structural Design for Elevated Temperatures," AD 131752, New York Academy of Science, New York (February 1957)
265. Weber, W. P., Quirk, J. F., Lemmon, A. W. Jr. and Filbert, R. B. Jr.: "Properties of Beryllium Oxide and Carbides of Beryllium, Molybdenum, Niobium, Tantalum and Titanium," Battelle Memorial Inst Rpt No. BMI-1165, Cleveland, Ohio (11 February 1957)
266. Wroten, W. L.: "Nitride Bonded Silicon Carbide," Product Engineering, 135-139 (February 1957)
267. Ault, N. N.: "Characteristics of Refractory Oxide Coatings Produced by Flame Spraying," Jour Amer Cer Soc, 40, No. 3, 69-74 (March 1957)
268. Gelly, H.: "Theoretical Study of Decomposable Coatings for the Protection of the Walls of Combustion Chambers," ASTIA NR AD 201 309, Translation-Brown, MHS, from FUSEES (March 1957)
269. "High Temperature Technology," Chem Eng (Reprint) (March 1957)
270. Probst, H. B. and McHenry, H. T.: "A Study of Impact Behavior of High Temperature Materials," NACA TN 3894 (March 1957)
271. Rasor, N. S.: "Thermal Properties of Materials, Part I," WADC Tech Rpt 56-400, Atomics Intl, NAA Inc., Canoga Park, Calif. (March 1957)

272. Brown, W. R., Francis, R. K. and Tinkelpaugh, J. R.: "The Bonding of Ceramic-Metal Laminate," AD 132 147, Alfred U, Alfred, New York (April 1957)
273. "Cermets as Potential Materials for High Temperature Service," NATO, Advanced Group for Aeronautical Research and Dev. (April 1957)
274. Cerness, J. F. et al: "Frictional Properties of High Temperature Seal Materials," Paper No 57 AM IA-2, ASLE Annual Meetisng, Detroit, Mich. (15 April 1957)
275. Doane, D. V.: "Oxidation-Resistant Coatings for Molybdenum," WADC Technical Report 54-492, Part III (April 1957)
276. Gurland, J.: "Comparison of the Strength of Sintered Carbides," Journal of Metals, 9, 512-513 (April 1957)
277. McClelland, J. D.: "Thermal Properties of Materials, Part II," WADC TR 56-400, Atomics International, NAA, Canoga Park, Calif. (April 1957)
278. Monack, A. J.: "Electrical Insulation Materials," Materials and Methods Manual, 137 (April 1957)
279. "Oxidation Resistant Coatings for Molybdenum," WADC No 54-492, Climax Molybdenum Co. of Michigan (April 1957)
280. "Preparation of Protective Coatings by Electrophoretic Methods," WADC 56-521, Vitro Laboratories, West Orange, New Jersey (April 1957)
281. "Product Refinement Contract for Ceramic Metal Tubes," Bendix Aviation Corp., Eatontown, New Jersey (April 1957)
282. "Study of Heat Transfer of Ceramic Materials," AD 134314, Alfred University, Alfred, New York (April 1957)
283. Curran, M. T., Riegert, R. P., Francis, R. K., Truesdale, R. S., and Tinklepaugh, J. R.: "Ceramic Reinforced Alloys and Plated Ceramics," WADC Tech Rpt 57-39, ASTIA NR AD 130754, Matls Lab Contract No AF 33(616)-2414, The New York State Col of Ceramic Alfred, New York (May 1957)
284. Haniger, Z.: "Some Methods of Protecting Molybdenum Against Oxidation at Elevated Temperatures," Techn Zparary VUPM, No 5, 17-20 (May 1957)

285. "Interim Report on Evaluation of Test for Cermets as Components of Heat Resistant Materials," NBS, Washington 25, D.C. (May 1957)
286. "A Study of Hot Pressing of Beryllia Rocket Nozzles," WADC 57-32, Brush Beryllium Co. (May 1957)
287. "Deposition of Glaze Materials on Ceramics by Electrophoresis," Nillex Corp., Vitro Mfg Co., Vitro Labs, Pittsburgh, Penna. (June 1957)
288. Steinitz, R.: "Cermets and Metallic Refractories," Aviation R and D Handbook (June 1957)
289. Lynch, Quirk and Duckworth,: "Backing Materials for Ceramic Lined Rocket Motors," WADC Tech Rpt 56-636 (June 1957)
290. "Interaction of Uranium and Its Alloys with Ceramic Oxides," ANL 5765, Argonne National Laboratory, Lemont, Ill. (July 1957)
291. Bowers, D. J.: "Investigation of Erosion-Resistant Materials for Booster Fired Solid Propellant Rocket Nozzles," Battelle Contract DA 33 019 501 ORD 25, ASTIA NR AD 158 470 (August 1957)
292. Kuhlman, O.F. and Roth, R. N.: "Contract No DA 1-01-021-.506 ORD (P)-247, Redstone Arsenal, Ala., Servomechanisms, Inc., El Segundo, Calif. (August 1957)
293. Rice, T.: "Heat and Abrasion Resistant Paints for Rocket Launchers," Report No 57-2107, Project No DA-517-05-004, Rock Island, Illinois (28 August 1957)
294. Sklarew, S.: "Development and Evaluation of Insulating Type Ceramic Coatings," Marquardt Aircraft Co. (August 1957)
295. "High Temperature Oxidation of Molybdenum Under High-Altitude Conditions," NAA Inc., ASTIA NR AD 147839, NAA No AL 2617 (1 September 1957)
296. Lauchner, J. H., Bennett, D. G., King, R. M., and Ports, D. W.: "The Effect of Pre-Stressing on the Strength of Ceramic Coatings," ASTIA Doc Nr AD 138758 AFOSR-TN-57-768, Univ. Illinois Rpt., No 79, Contract AF18(603)-28, (AD136758) (September 1957)
297. "Metallic Fiber Reinforced Ceramics, Prog Rpt No 1," Alfred Univ., Alfred, New York (September 1957)

298. "Properties of Some Refractory Uranium Compounds," BMI 1223, Battelle Memorial Institute, Columbus, Ohio (September 1957)
299. LaRocca, E. W.: "The Use of Titanium for Rocket Nozzles Investigation of Hard Coatings for Titanium Components," NOTS Rpt 1865 (CONF) (October 1957)
300. Lynch, J. F. and Duckworth, W. H.: "Evaluation of BeO Hot Pressed Ceramics as Nozzle Throat Inserts for Liquid Fueled Rocket Motors," AD 142295, WADC TR 57-656, Battelle Memorial Institute, Columbus, Ohio (October 1957)
301. O'Sullivan, W. J. Jr. and Wade, W. R.: "Theory and Apparatus for Measurement of Emissivity for Radioactive Coating of Hypersonic Aircraft with Data for Inconel and Inconel X," NACA Tech Note 4121, superseeded by NASA TR R-90 (October 1957)
302. Walton, J. D., Poulos, N. E. and Mason, C. R.: "Investigation of High Temperature Resistant Materials," Contract NOrd 15701 (October 1957)
303. "Catalytic Properties of Rare Earth," Heavy Minerals Co., Chattanooga, Tenn. (November 1957)
304. "Exploratory Investigation of Inorganic Fiber Reinforced Inorganic Laminate," ARTC-O111, Goodyear Aircraft Corp., 2nd Quart. Rpt (November 1957)
305. Huppert, P. A.: "How High Temperature Ceramic Coatings Protect Aluminum," Ceramic Industry, (November 1957)
306. Huppert, P. A.: "Ceramic Coatings Raise Heat Resistance of Super-Alloys," Iron Age, (14 November 1957)
307. Whelan, P. T.: "Effects of Several Impregnants on the Oxidation Resistance of Graphite," WAL TR 371/49, Project DA-5U11-01-002, Watertown Arsenal, Mass. (November 1957)
308. Beller, W.: "How Ceramics Help Metals Beat the Heat Barrier," American Aviation, (16 December 1957)
309. Buckle, H.: "Molybdenum Alloys and Their Protection Against Oxidation," Recherche Aeronautique, (November/December 1957)
310. "Cemented Metallic Borides," American Electrometal Division, Firth Sterling Inc., Yonkers, New York (December 1957)

311. Cremens, W. C. and Grant, N. J.: "High Temperature Properties of Nickel-Alumina Alloys," MIT Dept of Metallurgy, (5 December 1957)
312. Lauchner, J. H., Cook, R. L. and Andrews, A. I.: "The Effect of Firing Schedules on the Stress-Temperature Relationship of Enamel-Metal Systems," Jour Amer Cer Soc, 40,(12) 410-415 (December 1957)
313. "Metallic Fiber Reinforced Ceramics, Prog Rpt No 2," Alfred Univ., Alfred, New York (December 1957)
314. Searcy, A. W.: "Predicting the Thermodynamic Stabilities and Oxidation Resistances of Silicide Cermets," J. Am. Ceram. Soc., 40, (12), 431-435 (December 1957)
315. Zerlaut, G. A.: "Development of a Protective Coating for the Payload of Missile RS-29," Rpt No DS-IN-140, ABMA, Eng Matl Lab, Structures and Mechanics Lab, DOD, Redstone Arsenal, Alabama (December 1957)
316. Anderko, K., and Hansen, M.: Constitution of Binary Alloys, 2nd Edition, McGraw-Hill Book., New York (1958)
317. Ault, G. M., Deutsch, G. C. and Meyer, A. J., Jr.: "A Review of the Development of Cermets," North Atlantic Treaty Organization, ASTIA 206236 (1958)
318. Benesovsky, F. and Kieffer, R.: "Recent Developments in the Field of Silicides and Borides of the High-Melting-Point Transition Metals," Powder Metallurgy, No. 1/2, 145-170 (1958)
319. "Conference on Extremely High Temperature," USAF Cambridge Research Center, Electronic Research Directorate, John Wiley and Sons Inc., New York (1958)
320. Fields, E. M., Hopko, R. M., Swain, R. L. and Trout, O. F. Jr.: "Behavior of Some Materials and Shapes in Supersonic Free Jets at Stagnation Temperatures up to 4210° F and Descriptions of the Jets," NACA RM L57K26 (1958)
321. Kawashima, C., Murata, Y. and Setaka, N.: "Apparatus for Measuring the Warpage of Refractory Coated Steel Plate at High Temperatures," Yo gyo Kyakai Shi, 66, No 756, 281-286 (1958)
322. Koubek, F. J., Perry, H. A. Jr and Silver, I.: "POLARIS Materials Program-I: Literature Survey-II: Thermal and Mechanical Properties of Ceramics, Cermets and Metals," Nav Ord Rpt 6056 (1958)

323. "The Metal Molybdenum," American Society for Metals, Cleveland (1958)
324. "Metals for Supersonic Aircraft and Missiles," Jour Amer Soc for Metals, Cleveland (1958)
325. Moore, N. C., Huffadine, J. B., and Longland, L.: "The Fabrication and Properties of Chromium-Alumina and Molybdenum-Chromium-Alumina Cermets," Powder Metallurgy, (1958)
326. Rhys, D. W.: "Laboratory Studies on Processes Using Platinum for the Protection of Molybdenum Against Oxidation at High Temperatures," Comptes redu du symposium sur la Fusion du Verre, Bruxelles (1958)
327. Robins, D. A.: "Bonding in Carbides, Silicides, and Borides," Powder Metallurgy, No. 1/2 (1958)
328. "Symposium on Thermal Shock," Trans. Brit. Ceram. Soc. (1958)
329. Taylor, T. A. and Glenny, E.: "The High-Temperature Properties of Ceramics and Cermets," Powder Metallurgy, No. 1/2, 189-226 (1958)
330. Werner, A. C. and Abelson, R. J.: "Preparation of Protective Coatings by Electrophoretic Methods," WADC TR 58-11, ASTIA NR 150970 (1958)
331. Anderson, H. W.: "A Method for Estimating the Heat of Formation of Inorganic Compounds," UCRL-8152 (January 1958)
332. Oxx, G. D. Jr.: "Which Coating at High Temperature?" Prod. Eng., 61-63 (January 20, 1958)
333. Smoke, E. J. and Koenig, J. H.: "Thermal Properties of Ceramics," Rutgers University, Coll of Eng Res, New Jersey Ceramic Res Station, New Brunswick, New Jersey (January 1958)
334. Thorn, R. J. and Ackermann, R. J.: "Reactions Yielding Volatile Oxides at High Temperatures; Free Energies of Gaseous  $\text{Al}_2\text{O}$ ,  $\text{ZrO}$ ,  $\text{TaO}$ ,  $\text{ZrO}_2$ ,  $\text{ThO}_2$ ,  $\text{TaO}_2$ ,  $\text{UO}_2$  and  $\text{WO}_3$ ," ANL-5824 (January 1958)
335. Daane, A. H. and Heafling, J. F.: "The Vapor Pressure of Palladium," Trans., AIME, 115-116 (February, 1958)

336. Dorsey, J. J.: "Development and Evaluation Services on Ceramic Materials and Wall Composited for High Temperature Radome Shapes," WADC TR 57-665, Contract Nr AF 33(616)-3397, AD 150965, PR Mallory and Co., Inc., Corporate Research Laboratories, Indianapolis, Indiana (February 1958)
337. Grinthal, R. D.: "New High Temperature Intermetallic Materials, Part 6," WADC Tech Rpt 53-190 (February 1958)
338. Stirland, P. J. et al: "Observations of Thermal Transformations in Alumina," Trans. Brit Ceram Soc., 57, No 2, 69-84 (February 1958)
339. Walker, R. and Wyatt, H. W.: "Measuring Fracture of Ceramic Coatings," Materials in Design Engineering, 47, No 2, 164-170 (February 1958)
340. Anon: "What's New in Refractory Ceramic Coatings for Super Metal Alloy," Ceramic Industry, 70, No 3, 62-64 (March 1958)
341. "Ceramic Coating of Engines," AR 5558-58, Gulton Industries Inc., Metuchen, New Jersey (March 1958)
342. Spretnak, J. W. and Speiser, R.: "Protection of Niobium Against Oxidation at Elevated Temperatures," Rpt 467-16, Ohio State U Res Found (28 March 1958)
343. Deutsch, Meyer and Ault,: "A Review of the Development of Cermets," NATO AGARD Rpt 185, NASA Code No N-60362 (March/April 1958)
344. Sklarew, S.: "A Method of Calculating Thermal Conductivity Based on Temperature Drop Through a Ceramic Coating," The Marquardt Co. (April 1958)
345. Stetson, and Hodnick: "Process Improvement Study for Aluminizing by Ceramic Technique," AMC Rpt 58-7-528, Air Material Command, Wright-Patterson (April 1958)
346. Cannistraro, N. I.: "Where Do We Stand in Ceramic Coatings," Metal Progress, 74, No 5, 111-113, 189-190 (May 1958)
347. DeBan, King: "Brass Bell Recommaissnace Aircraft Weapon System Test Result Materials and Structures," ARDC Tech Rpt 58-47 (June 1958)
348. Love, B.: "Selection and Evaluation of Rare or Unusual Metals for Application to Advanced Weapons Systems, Part I: A Literature Survey on Hafnium, Rhodium and Ruthenium," WADC Tech Rpt 57-666, ASTIA NR AD 155 685 (June 1958)

349. "Properties of Refractory Materials Collected Data and References," LMSD 2466, Lockheed Aircraft Corp., Sunnyvale, Calif. (June 1958)
350. Brewer, Leo: "Dissociation Energies of Gaseous Oxides," UCRL-8356 (July 1958)
351. Lauchner, J. H.: "Thermal Deflection of Porcelain Enamel-Metal Composites," Ceramic Age (7) 11-12 (July 1958)
352. Materials Symposium, Air Research and Development Command WADC (July 1958)
353. "Protective Coatings Developed for Molybdenum and Columbium to Date," Fansteel Metallurgy, Form F-1073 R, Fansteel Metallurgical Corp., Chicago, Ill. (July 1958)
354. Rashis, Witte, and Hopko: "Qualitative Measurements of the Effective Heats of Ablation of Several Materials in Supersonic Air Jets at Stagnation Temperatures up to 11,000° F," NACA Rpt RM L58E22, Langley Research Gent., Langley Field, Virginia, ASTIA NR AD 300 207L (July 1958)
355. Steurer, W. H.: "Criteria in the Selection of Materials for High Temperature Structures," Research Projects Lab, ABMA. Redstone Arsenal, Ala., Rpt DV-TN-67-68, Paper Presented at the 3rd Symposium, High Speed Aerodynamics and Structures, San Diego, Calif., 25-27 March 1958. (10 July 1958)
356. Weber and Schwartz: "Zirconia-Its Crystallographic Polymorphy and High Temperature Potentials," WADC Tech Rpt 58-646, ASTIA NR AD 206 908 (July 1958)
357. Allen, J. M. and Harper, J. L.: "Development of Testing Procedures and Evaluation of Refractory Materials," WADC Tech Rpt 58-682 (August 1958)
358. Arenberg, C. A.: "Protective Coatings for Tantalum," WADC Tech Rpt 58-203 (August 1958)
359. Brenner, A., Couch, D. E., Shapiro, H., and Taylor, J. K.: "Protection of Molybdenum from Oxidation at Elevated Temperatures," J. Electrochem. Soc., 105 (8), 485-486 (August 1958)
360. Sklarew, S.: "Development and Evaluation of Insulating Type Ceramic Coatings," 2nd Quarterly Progress Rpt, Marquardt Aircraft Co. (August 1958)

361. Breslkin, J. and Kaiser, W.: "Factors Determining the Oxygen Content of Liquid Silicon at Its Melting Point," J. Applied Physics, 29, (9), 1292-1294 (September 1958)
362. Goodwin and Ayton: "Thermal Properties of Certain Metals, Part II: Iron, Beryllium, Iridium, Platinum, Palladium and Tungsten," WADC Tech Rpt 56-423, ASTIA NR AD 157169 (September 1958)
363. Hirakis, E. C.: "Research for Coatings for Protection of Niobium Against Oxidation at Elevated Temperatures," WADC Tech Rpt 58-545, Contract AF 33(616)-5356, Horizons Inc. (September 1958)
364. Partridge, W. S.: "High Velocity Impact," Proceedings of the Fifth Sagamore Ordnance Materials Res Conference, "Materials in Space Environment", Utah Research and Development Co. (September 1958)
365. Scully, C. N.: "Effects of Meteorites on Materials and Simulation Testing," Proceedings of the Fifth Sagamore Ordnance Materials Research Conference, "Materials in Space Environment," North American Aviation Co., Downey, Calif. (September 1958)
366. Shaw, F. D.: "Uses Grow for Ceramic Coatings," Iron Age, 182, 94-95 (25 September 1958)
367. Wagner, Carl: "Passivity During the Oxidation of Silicon at Elevated Temperatures," J. Applied Physics, 29 (9), 1295-1297 (September 1958)
368. Dukes, W. H., Anthony, F. M. and Pearl, H. A.: "Investigation of Feasibility of Utilizing Available Heat-Resistant Materials for Hypersonic Leading Edge Applications," Rpt 7008-0252-003, WADC Contract No AF 33(616)-6034, Bell Aircraft Corp., Buffalo, New York (October 1958)
369. Eubanks, A. G. and Moore, D. G.: "Investigation of Aluminum Phosphate Coatings for Thermal Insulation of Airframes," NBS Rpt No 6173 (October 1958)
370. Lynch, J. F., Quirk, J. F. and Duckworth, W. H.: "Investigation of Ceramic Materials in a Laboratory Rocket Motor," Amer Cer Soc Bull., 37, No 10, 443-445, Battelle Memorial Institute, Columbus, Ohio (October 1958)
371. Murphy, H. M. and Fryburg, G. C.: "On the Use of Furnaces in the Measurement of the Rate of Oxidation of Platinum and Other Metals Forming Volatile Oxides," Trans. AIME, 660-661 (October 1958)

372. Oxley, J. H. et al: "Coating of Uranium Dioxide Powders with Metallic Tungsten Films," Battelle Memorial Institute Rpt BMI-1297, Columbus, Ohio (October 1958)
373. "Review of the Thermal Radiation Property Values for Metals and Other Materials," Honeywell Research Center, Hopkins, Minn., GR 2462-R3 (October 1958)
374. Francis, Brown, McNamara and Tinklepaugh: "Metal-Ceramic Laminated," WADC Tech Rpt 58-600, ASTIA NR 205 549 (November 1958)
375. Sheer, C. et al: "Investigation of the High Intensity Arc Technique for Materials Testing," WADC Tech Rpt 58-142, ASTIA NR AD 205 364 (November 1958)
376. Roller, David: "Surface Treatment and Chemical Processing," paper in WADC Technical Report 58-655 (December 1958)
377. Roller D.: "Summary of First High Temperature Inorganic Refractory Coatings Working Group Meeting," WADC Tech Memorandum WCLT TM 58-139, Mats Lab (December 1958)
378. Van Houten, G. R.: "A Survey of the Bonding of Cermets to Metals," The Welding Journal, 1-12 (December 1958)
379. Ceramics and Refractories, 1930-1959, Includes Coatings: Ceramics, Enamel and Refractory; High Temperature and Electrical Properties of Ceramics; ceramics and Refractories, General) CTR-373, U.S. Dept. of Commerce
380. Gilbey, D. M.: "Theory of Thermal Stresses," J. Less-Common Metals (1959)
381. Goldberg, D. C.: "Forming of Clad Molybdenum," Fabrication of Molybdenum, American Society for Metals, Cleveland Ohio (1959)
382. Hall, F. P., Levin, E. M. and McMurdie, H. F.: Phase Diagrams for Ceramists, Parts I and II, American Ceramic Society, Columbus, Ohio (1956 and 1959)
383. High Temperature Materials, John Wiley and Sons, Inc., New York (1959)
384. Jaffee, R. I.: "Protective Coating Systems for Molybdenum," Fabrication of Molybdenum, American Society for Metals, Cleveland, Ohio (1959)

385. Kinetics of High-Temperature Processes, W. D. Kingery, Editor, John Wiley and Sons, New York (1959)
386. Kingery, W. D.: Property Measurements at High Temperatures, John Wiley and Sons, Inc., New York (1959)
387. Levinstein, M. A.: "The GE Molybdenum Bucket Story, Coating Development and Evaluation," Fabrication of Molybdenum, American Society for Metals, Cleveland, Ohio (1959)
388. McLean, W. J.: "Relative Benefit Afforded by Coating A Heat Sink with a Thin Ceramic Layer," Nav Ord 6694 (1959)
389. Perry, H. A.: "Heat Transfer and Thermal Stresses in Metallic Heat Sinks with Ceramic Coatings in a POLARIS Re-entry," Nav Ord Rpt 6302 (1959)
390. Physicochemical Measurements at High Temperatures, Academic Press, Inc., New York (1959)
391. Shepard, A. P. and Ingham, H. S.: Metallizing Handbook, Metallizing Engineering Co., Inc., Westbury, L. I., New York (1959)
392. Bonin, J. et al: "Determination of Factors Governing Selection and Application of Materials for Ablation Cooling of Hypervelocity Vehicles," WADC Tech Rpt 59-58 (January 1959)
393. Bradshaw, Wanda G. and Matthews, C. O.: "Properties of Refractory Materials: Collected Data and References;"(2nd edition)Lockheed Missile Systems Division Rpt LMSD-2466 (15 January 1959)
394. Cuthill, J. R., Richmond, J. C. and Tighe, N. J.: "Effect of a Ceramic Coating on the Creep Behavior of Some High-Temperature Alloys," Amer Cer Soc Bull., 38, No 1, 4-12 (January 1959)
395. Douglas, E. A.: "Ceramic Coatings for the Control of Radiant Heat," Amer Cer Soc Bull., 38, No 1, 20-23 (January 1959)
396. Dukes, W. H., Anthony, F. M. and Pearl, H. A.: "Investigation of Feasibility of Utilizing Available Heat Resistant Materials for Hypersonic Leading Edge Applications," WADC Contract AF 33(616)-6034, Rpt No 7008-0252-006, Bell Aircraft Corp., Buffalo, New York (January 1959)
397. Kingery, W. D.: "Surface Tension of Some Liquid Oxides and Their Temperature Coefficients," Jour Amer Cer Soc, 42, No 1, 6-10 (January 1959)

398. Livey, D. T.: "The High Temperature Stability of Oxides and Sulphides," J. Less-Common Metals, 1, 145-151 (1959)
399. Staff Report, "30,000 Degrees with the Plasma Jet," Journal of Metals, 2, No 1, 40-42, (January 1959)
400. Galli, Jr., Wheeler, G. I., Clampitt, B. H., German, D. E. and Johnson, R. B.: "Development and Evaluation of Rocket Blast and Rain Erosion Resistant Composite Coatings Produced by Flame Spray Techniques," Eng Mats and Process Unit, Boeing Airplane Co., Wichita Div., Wichita, Kansas, WADC Tech Rpt 58-493, ASTIA NR 209 913 (February 1959)
401. Johnson, C. E.: "Vibrational and Thermal Cyclic Test Data on Molybdenum Coatings," Rpt R59AGT98, General Electric Flight Propulsion Laboratory Department (February 18, 1959)
402. Long, G. and Foster, L. M.: "Aluminum Nitride, a Refractory for Aluminum to 2000° C," Jour Amer Cer Soc., 42, 53-59 (February 1959)
403. Aves, W. L.: "Coatings for Re-entry," Metal Progress, 75, No 3 90-93, 189, 190 (March 1959)
404. Bartlett, Ogden and Jaffee: "Report on Coatings for Protecting Molybdenum from Oxidation at Elevated Temperature," OTS Document No PB 151065, DMIC, Battelle Memorial Inst., Columbus, Ohio, ASTIA NR AD 210 978 (March 1959)
405. Kramer, B. E.: "Development of High Strength Materials for Solid Rocket Motors," Final Rpt Bu Ord Contract Nord 18119, Rocket Engine Section, Flight Propulsion Dept., General Electric Co., Evendale, Ohio, GE Rpt No 61FPD156 (March 1959)
406. Lauchner, J. H. and Bennett, D. G.: "Thermal Fracture Resistance of Ceramic Coatings Applied to Metal: I, Elastic Deformation," Jour Amer Cer Soc., 42, No 3 146-150 (March 1959)
407. Levy, A. V.: "Ceramic Coatings for Insulation," Metal Progress, 75, No 3, 86-89 (March 1959)
408. Speiser, R., Gordon, G., and Scheuermann, C.: "The Oxidation Characteristics of Columbium Alloys," Technical Report 467-5, ORN Contract N6 ORN 22528 (March 1959)

409. Thornton, H. R. and Moore, D. G.: "Effect of Oxygen on the Bonding of Gold to Fused Silica," J. Research NBS, 62, 127-135 (March 1959)
410. White, J.: "The Role of Refractories in an Expanding Technology," The Refractories Journal, 104-114 (March 1959)
411. Bradford, V. E. et al: "Protective Coatings for Refractory Metals," WADC Metals Lab Contract AF 33(616)-5734, U of Ill., Dept of Ceramic Engr, Urbana, Ill. (April 1959)
412. Brewer, L. and Chandrasekharaiah, M. S.: "Free Energy Functions for Some  $\text{MO}_2$  Oxides," UCRL-8736 (April 1959)
413. Erthal, J. F., and Mahorter, R. G.: "Coatings for Molybdenum," Rpt # NAMC-AML-AE-410, (April 7, 1959)
414. Herz, W. H.: "Cermets," Materials in Design Engineering (April 1959)
415. Hiler, M. J. and Jenkin, W. C.: "Development of a Method to Accomplish Aluminum Deposition by Gas Plating," WADC Tech Rpt 59-58 (April 1959)
416. Staff Article, "Molybdenum Coating Stands Up at 2000° F," Space/Aeronautics, 31, No 4, 97-100 (April 1959)
417. "Development of Protective Coatings for Refractory Metals," WADC Matls Lab Contract AF 33(616)-5735, New York Univ, Coll of Eng, Research Div (May 1958 to May 1959)
418. Kirchner, H. P.: "An Investigation of the Theoretical and Practical Aspects of the Thermal Expansion of Ceramic Materials," Cornell Aeronautical Laboratory (May 1, 1959)
419. Wachtman, J. R. Jr. and Lam, D. G. Jr.: "Young's Modulus of Various Refractory Materials as a Function of Temperature," Jour Amer Cer Soc., 42, No 5, 254-260 (May 1959)
420. Williams, J. C. and Nielsen, J. W.: "Wetting of Original and Metallized High-Alumina Surfaces by Molten Brazing Solders," Jour Amer Cer Soc., 42, No 5, 229-235 (May 1959)
421. Giancola, J. R.: "Evaluation of Protective Coatings for Molybdenum Nozzle Guide Vanes," WADC Technical Note 58-241 (June 1959)

422. Koubek, F. J. and Timmins, A. R.: "High Temperature Testing of Ceramics for Re-entry Body Applications," Nav Ord Rpt 6298 (June 1959)
423. Leonard, B.: "Ceramic Coatings Protect Heat-Treated Parts," Metal Progress, 75, No 6, 121 (June 1959)
424. Roller, D.: "Summary of Second High-Temperature Inorganic Refractory Coatings Working Group Meeting," WADC Tech Rpt 59-415, Matls Lab (June 1959)
425. Symposium on Thermal Fracture, J. Am. Ceram. Soc. (June 1959)
426. Van Houten, G. R.: "A Survey of Ceramic-to-Metal Bonding," Amer Cer Soc Bull., 38, No 6, 301-307 (June 1959)
427. Gordeeva, L. T. and Grdina, Yu. V.: Isv. Vus. - Chern. Metallurgiya, No 7, 96-100, Brutcher Translation No 4766 (July 1959)
428. Heckman, G. R. and Herbenaur, A. W.: "Materials," Trans. ASME, 219-225 (July 1959)
429. Pearl, H. A. and Anthony, F. M.: "Selection of Materials for Hypersonic Leading-Edge Applications," Aerospace Engineering, 40-43, 62 (July 1959)
430. Venable, C. R. Jr.: "Erosion Resistance of Ceramic Materials for Petroleum Refinery Applications," Amer Cer Soc Bull., 38, No 7, 363-368, (July 1959)
431. Bradstreet, S. W.: "Geometrical Considerations for Composites," Proceeding of the Sixth Sagamore Ordnance Materials Research Conference, "Composite Materials and Composite Structures", Armour Research Found, Chicago, Ill. (August 1959)
432. Bush, E. A. and Hummel, F. A.: "High-Temperature Mechanical Properties of Ceramic Material:II, Beta-Eucryptite," Jour Amer Cer Soc, 42, No 8, 388-391 (August 1959)
433. Jaffee, R. I., Douglass, R. W. and Holden, F. C.: "High Temperature Properties and Alloying Behavior of the Refractory Platinum-Group Metals," (August 14, 1959)
434. Kirchner, H. P., Stutzmann, R. H., and Salvaggi, J. R.: "An Investigation of the Theoretical and Practical Aspects of the Thermal Expansion of Ceramic Materials Volume 1-Literature Survey," Cornell Aeronautical Laboratory, Inc. (August 31, 1959)

435. Kundsen, F. P.: "Dependence of Mechanical Strength of Brittle Polycrystalline Specimens on Porosity and Grain Size," J. Am. Ceram. Soc., 42 (8), 376-387 (August 1959)
436. Shanley, F. R. and Knapp, W. J.: "Laminated Metal-Ceramic Composite Materials," Proceedings of the Fifth Sagamore Ordnance Materials Research Conference, "Materials in Space Environment," Univ of Calif, Los Angeles, Calif (August 1959)
437. Sklarew, S.: "Reinforced Refractory Ceramic Coatings," Proceedings of the Sixth Sagamore Ordnance Matls Res Conferenc, "Composite Materials and Composite Structures," The Marquardt Co., Van Nuys, Calif. (August 1959)
438. Smyth, H. T., Kirchner, H. P. and Merz, K. M.: "An Investigation of the Theoretical and Practical Aspects of the Thermal Expansion of Ceramic Materials Volume 2-Research," Cornell Aeronautical Laboratory (August 31, 1959)
439. Beck, W.: "Use of Nickel-Aluminum Alloy Coatings for the Protection of Molybdenum from Oxidation," J. Electrochem. Soc., 106, (9) 683-796 (September 1959)
440. Andrews, A. I.: "Developments in Vitreous Enameling," Metal Finishing Journal, 355-360 (October, 1959)
441. Gurklis, J. A. and Beach, J. G.: "Procedures for Electroplating Coating on Refractory Metals," DMIC Memorandum 35 (October 9, 1959)
442. Lozier, W. W.: "Development of Graphite and Graphite Base Multi-component Materials for High Temperature Service," WADC Contract No AF 33(616)-5563, WADC Tech Rpt 59-789, Progress Rpt No 7, dated March 1959, National Carbon Research Laboratories, Parma, Ohio (October 1959)
443. Nagel, B. H.: "Annotated Bibliography on Permeation of Gases Through Solids," Rpt EM-5883, Autonetics, Division of North American Aviation (October 12, 1959)
444. Summary Report of the Committee on Refractory Metals of the Materials Advisory Board, Division of Engineering and Industrial Research, National Academy of Sciences, Rpt MAB-154-M, Vol I-National Research Council, Washington 25, D.C. (October 15, 1959)
445. Tripp, H. P.: "Development of Corrosion Resistant Coatings for Use at High Temperatures," AF 33(616)-6374, Gulton Industries, Metuchen, New Jersey (October 1959)

446. Zambrow, J. L. and Fugardi, J.: "The Cladding and Welding of Stainless Steel to Molybdenum and Niobium," WADC Technical Rpt 58-674 (October 1959)
447. Auit, N. N. and Milligan, L. H.: "Alumina Radomes by Flame-Spray Process," Amer Cer Soc Bull, 38, No 11, 661-664 (November 1959)
448. Duckworth, W. H., King, B. W. and Tripp, H. P.: "Nature of Adherence of Porcelain Enamels to Metals," J. Am. Ceram. Soc., 42, (11), 504-525 (November 1959)
449. Tiede, R. L.: "Improved Apparatus for Rapid Measurement of Viscosity of Glass at High Temperatures," Jour Amer.Cer. Soc., 42, No 11, 537-541 (November 1959)
450. Cutler, I. B., Jorgensen, P. J. and Wadsworth, M. W.: "Oxidation of Silicon Carbide," J. Am. Ceram. Soc., 42 (12) 613-616 (December 1959)
451. Deem, H.W., Wood, W. D. and Lucke, C. F.: "Thermal Properties of Materials at Elevated Temperatures," WADC Contract No. AF 33(616)-5849, Tech Note 59-215, Battelle Memorial Inst., Columbus, Ohio (December 1959)
452. Faust, C. L.: "Important Factor for Coating for High Temperatures," Proceedings, Aerospace Finishing Symposium, SAMPE, Fort Worth, Texas (December 8-9, 1959)
453. Hjelm, L. N.: "The Screening of Material Systems for High Temperature Applications," Proceedings, Aerospace Finishing Symposium, SAMPE, Fort Worth, Texas (December 8-9, 1959)
454. Jaffee, R. I.: "A Brief Review of Refractory Metals," DMIC Memorandum 40 (December 3, 1959)
455. Merz, K. M.: "An Investigation of the Theoretical and Practical Aspects of the Thermal Expansion of Ceramic Materials," Cornell Aeronautical Laboratory (December 15, 1959)
456. Molella, D. J.: "Investigation and Evaluation of Available Hypersonic Probe Materials and Oxidation-Resistant Coatings for Possible Use at 4000 F for 60 seconds," Technical Memorandum ME-5-59, Picatinny Arsenal, ASTIA (December 1959)
457. Myers, J. R.: "High Temperature Coatings for Aerospace Applications," Proceedings, Aerospace Finishing Symposium, SAMPE, Fort Worth, Texas (December 8-9 1959)

458. Richmond, J. C. and Steward, J. E.: "Spectral Emittance of Ceramic-Coated and Uncoated Specimens of Inconel and Stainless Steel," Jour. Amer. Cer. Soc., 42, No 12, 633-640 (December 1959)
459. Wachtell, R. L.: "Surface Protection of Metals for Atmospheric Re-entry by the Diffusion Technique," Proceedings, Aerospace Finishing Symposium, SAMPE, Fort Worth, Texas (December 8-9, 1959)
460. Walton, J. D.: "Experimental Application of ARc and Flame Sprayed Coatings," Proceedings, Aerospace Finishing Symposium, SAMPE, Fort Worth, Texas (December 8-9, 1959)
461. Bradstreet, S. W.: "Flame Sprayed Catalyst Coatings," Proc. of the Porcelain Enamel Institute, 22, 130-132, (1960)
462. Clauss, F. J. (Ed.): Surface Effects on Spacecraft Materials, (1960)
463. Crandall, W. B. and Tinklepaugh, J. R.: Cermets, Reinhold Publishing Corp., New York (1960)
464. Kelley, K. K.: "Contributions to the Data on Theoretical Metallurgy XIII. High Temperature Heat-Content, Heat Capacity, and Entropy Data for the Elements and Inorganic Compounds," U. S. Bureau of Mines Bulletin 584 (1960)
465. Kohl, W. H.: Materials and Techniques for Electron Tubes, Reinhold Publishing Corp., New York (1960)
466. Mende, Serge De, and Audubert, Rene: The Principles of Electrophoresis, Macmillan Co., New York (1960)
467. Proceedings of an International Symposium on High-Temperature Technology, McGraw-Hill Book Co., Inc., New York (1960)
468. Stumpf, H. C., Newsome, J. W., Heiser, H. W. and Russell, A. S.: "Aluminum Properties, Tech. Paper #10 2nd Revision," Aluminum Company of America (1960)
469. Tebben, Alfred and Schafer, Von Harold,: "Gleichgewichtsmessungen im System Platin-Sauerstoff, Gasformiges Platindioxyd," Zeitschrift fur anorganische und allgemeine Chemie, 304, 317-321 (1960)
470. Tipton, C. R. Jr.: Reactor Handbook, 2nd Edition, 1, "Materials," Interscience Publishers, Inc., New York (1960)
- 470a. Heiland, Hans-Joachim, and Schafer, Von Harold: "Gleichgewichtsmessungen in System Iridium-Sauerstoff, Gasförmiges Iridiumtrioxyd," Zeitschrift für anorganische und allgemeine Chemie, 304, 249-265 (1960)

471. Westbrook, J. H.: Mechnaical Properties of Intermetallic Compounds, (1960) John Wiley and Sons Inc., New York, New York
472. Baskin, Y., Greenig, T. A. and Kemp, M. J.: "Failure Mechanisms of Solid Propellant Rocket Nozzles," Amer Cer Soc Bull., 39, No 1, 14-18 (January 1960)
473. Grinthal, R. D.: "Fabrication, Properties, and Applications of Some Metallic Silicides," J. Electrochem. Soc., 59-61 (January 1960)
474. Holmes, R. F. and Hurd, D. E.: "A Study of Rain Erosion Testing Methods for Supersonic Speed," WADC Technical Report 53-173, Part VI (January 1960)
475. Jaccodine, R. J.: "Nodule Growth on Al<sub>2</sub>O<sub>3</sub> Coatings," J. Electrochem. Soc. (January 1960)
476. Klopp, W. D.: "Oxidation Behavior and Protective Coatings for Columbium and Columbium-Base Alloys," DMIC Rpt 123, OTS PB 151080 (January 15, 1960)
477. Powell, C. F.: "Gas Plating," Materials in Design Engineering, (January 1960)
478. Smiley, W. D., Sobon, L. E., Hruz, F. M., Farley, E. P., Chilton, J. E., Poncelet, E. F., and Kelley, J. J.: "Mechanical Property Survey of Refractory Nonmetallic Crystalline Materials and Intermetallic Compounds," WADC Tech Rpt 59-448, ASTIA 234775 (January 1960)
479. Bartlett, E. S. and Houck, J. A.: "Physical and Mechanical Properties of Columbium and Columbium-Base Alloys," DMIC Rpt 125, OTS PB 151082 (February 22, 1960)
480. Bonin, J. H., Price, C. F. and Halle, H.: "Determination of Factors Governing Selection and Application of Materials for Ablation Cooling of Hypervelocity Vehicles, Part III," WADC Tech Rpt 59-87, Contract No AF 33(616)-5436, Chicago Midway Labs, Univ of Chicago, Ill (February 1960)
481. Bunshah, R. F., Goetzel, C. G. and Venkatesan, P. S.: "Development of Protective Coatings for Refractory Metals," WADC Tech Rpt 59-405 (February 1960)
482. Goetzel, C. T., Venkatesan, P. S. and Bunshah, R. F.: "Development of Protective Coatings for Refractory Metals," WADC Tech Rpt 59-405, Contract No AF 33(616)-5735, New York University (February 1960)

483. Jaffee, R. I., Harris, W. J. Jr., and Promisel, N. E.: "Development of Refractory Metal Sheet in the United States," J. Less-Common Metals, 2, 95-103 (February 1960)
484. Jaffee, R. I. and Maykuth, D. J.: "Refractory Materials," DMIC Memorandum 44 (February 26, 1960)
485. Myers, J. R., Chao, P. J. and Priest, D. K.: "Recent Progress in Protective Coatings for Molybdenum," J. Less-Common Metals, 2, 426-442 (February 1960)
486. Ogbwin, F. and Reid, W. E. Jr.: "The Adhesion of Electrodeposited Nickel to Chromium at Elevated Temperatures," J. Electrochem. Soc., 107 (2), 91-93 (February 1960)
487. Trout, O. F., Jr.: "Exploratory Investigation of Several Coated and Uncoated Metal, Refractory, and Graphite Models in a 3800 F Stagnation Temperature Air Jet," NASA TN D-190 (February 1960)
488. Barth, V. D.: "Physical and Mechanical Properties of Tungsten and Tungsten-Base Alloys," DMIC Rpt 127, OTS PB 151084 (March 15, 1960)
489. Cona, Gunderson, Breslich, Stejskal and Cross: "Development of Reinforced Ceramic Material Systems," WADD Contract No AF 33(616)-6511, WCLTECB, Boeing Airplane Co., Seattle 24, Washington (March 1960)
490. Hall, W. B. and Graham, J. W.: "Protective Coatings for Molybdenum Alloys," Final Summary Report under Navy Bureau of Weapons Contract NOAs 59-6026-6 (March 31, 1960)
491. Hooper, G. W. and Alcock, C. B.: "Thermodynamics of the Gaseous Oxides of the Platinum-Group Metals," Proc. Roy. Soc., 254A, 551-561 (March 8, 1960)
492. Lang, S. M.: "Properties of High-Temperature Ceramics and Cermets, Elasticity and Density at Room Temperature," National Bureau of Standards Monograph 6 (March 1960)
493. Lu, S. Y. and Nash, W. A.: "Effects of Heating on the Properties of Homogeneous and Heterogeneous Materials," Contract No DA-01-009-ORD-656, ABMA, Redstone Arsenal, Ala., Dept of Eng Mech, U of Fla., Gainesville, Fla. (March 1960)

494. Modisette, J. L. and Schryer, D. R.: "An Investigation of the Role of Gaseous Diffusion in the Oxidation of a Metal Forming a Volatile Oxide," NASA TN D-222 (March 1960)
495. Peterson, N. L.: "Diffusion in Refractory Metals," WADD Tech Rpt 60-793 (March 1960)
496. Reid, W. E. Jr. and Lamb, V. A.: "Electrophoretic Deposition of Metals, Metalloids, and Refractory Oxides," Plating, 291-296 (March 1960)
497. Seibold, R. E. and Birks, L. S.: "Diffusion of Nb With Cr, Fe, Ni, Mo, and Stainless," NRL Report 5461 (March 31, 1960)
498. Blair, G. R.: "Determination of Spectral Emissivity of Ceramic Bodies at Elevated Temperatures," Jour. Amer. Cer. Soc., 43, No 4, 197-203 (April 1960)
499. Cutler, I. B., Jorgensen, P. J. and Wadsworth, M. E.: "Effects of Oxygen Partial Pressure on the Oxidation of Silicon Carbide," J. Am. Ceram. Soc., 43 (4), 209-212 (April 1960)
500. Graham, J. W. and Hall W. B.: "System 400 Coating for the Protection of Columbium, Report No. DM-60-97," Aircraft Gas Turbine Division, General Electric (April 20, 1960)
501. Polanyi, T., Wallace R. and Florio, J.: "Investigation of the Chemical Reaction Between Tungsten and Aluminum Oxide," General Telephone and Electronic Laboratories, (April 1, 1960)
502. Douglass, R. W., Jaffee, R. I. and Maykuth, D. J.: "Rhenium and the Refractory Platinum-Group Metals," Wayne State Univ., Detroit, Michigan (May 25-26, 1960)
503. Florio, J. V.: "Dielectric Properties of Alumina at High Temperatures," Jour. Amer. Cer. Soc., 43, No 5, 262-267 (May 1960)
504. Graham, J. W., Luft, L. and Sayre, E. D.: "Protective Coatings for Refractory Metals," Paper presented at AIME Refractory Metals Symposium, Detroit Michigan (May 1960)
505. Grover, H. J., Mittenbergs, A. A., Williams, D. N., and Jaffee, R. I.: "Investigations of the Fatigue Properties of Molybdenum Under Various Conditions of Temperature, Coatings, and Stress Concentration," WADC Tech Rpt 60-427 (May 1960)

506. Lawrie, W. E. and Whymark, R. R.: "Ultrasonics and Ceramic Coatings," WADD Tech Rpt 60-157, under Contract AF 33(616)-6396 to investigate methods of nondestructively evaluation the bond between ceramic coatings and refractory Metals, (May 1960)
507. Miller, H. R. and Friedl, E. B.: "Developments in Electrographic Printing," Plating Magazine, (May 1960)
508. Symposium on Processing Materials for Re-Entry Structures, WADD Technical Report 60-58 (May 1960)
509. Vogan, J. W.: "Exploratory Development of Thermally Protective Surfaces for Structural Plastics," WADC Matls Lab Contract No AF 33(616)-6393, Bendix Aviation Corp., South Bend, Indiana (May 1960)
510. Weiss, L. M., Anderson, R. E., Devore, J. A., Glass, R. L. and Taylor, M. V.: "Thermodynamic Properties of Propellant Combustion Products," Rpt LRP 16(Special), Aerojet General Corp. (May 25, 1960)
511. Wilks, C. R.: "Effects of Temperature, Pressure, and Mass Flow on Oxidation of Molybdenum," SAMPE Eastern Division Meeting, Kresge Hall, M I T (3 May 1960)
512. Wurst, J. C., Smith, H. E. and Rosenbery, J. W.: "Diffusion Coating and Arc-Plasma Material Evaluation Studies," WADD Contract No AF 33(616)-6198, U of Dayton Red Inst., Dayton 9, Ohio (May 1960)
513. Batchelor, J. D., Vasileff, N., McCormick, S. W. and Olcott, E. L.: "Development and Evaluation of Solid Propellant Rocket Motor Case Insulating Materials Systems: Part I," WADD Tech Rpt 60-109, Contract No AF 33(616)-6316, Atlantic Research Corp. (June 1960)
514. Chandrasekharaiyah, M. S. and Brewer, L.: "Free Energy Functions for Gaseous Monoxides," UCRL-8713 (Rev.) (June 1960)
515. Coffin, L. F. Jr. and Oxx, G. D. Jr.: "A Liquid Phase Coating for Molybdenum," Trans. Met. Soc. AIME, 218, 541-545 (June 1960)
516. Harris, W. J., Jr., and Pellini, W. S.: "Flight in the Thermosphere, Parts I-IV," Metal Progress, (March-June 1960)
517. Holladay, J. W.: "References to Research on High-Emissivity Surfaces," DMIC Memorandum 57 (June 27, 1960)
- 517a. Moore, D. G.: "Basic Studies of Particle-Impact Processes for Applying Ceramic and Cermet Coatings," AF Contract Nr 33-(616)-58-19 NBS Rpt Nr 6891 (Progress Rpt No. 8)(1 April - 30 June 1960)

518. Waxler, R. M. and Adams, L. H.: "Temperature-Induced Stresses in Solids of Elementary Shape," NBS Monograph 2 (June 21, 1960)
519. Bowman, R. E.: "How Radiation Affects Engineering Materials," Materials in Design Engineering, (July 1960)
520. Bradstreet, S. W.: "Ceramic Coatings for High Temperature Service," Corrosion, 16, No 7, 81-83 (July 1960)
521. Eusner, G. R. and Hubble, D. H.: "Quality Parameters of 35 Super-Duty Plastic Refractories," Amer. Cer. Soc. Bull., 39, No 7, 349-351 (July 1960)
522. Inghram, M. G., Grimley, R. T. and Burns, R. P.: "Mass-Spectrometric Study of the Osmium-Oxygen System," J. Chem. Phys., 33, (1), 308-309 (July 1960)
523. Manos, W. P., Taylor, D. E. and Tuzzolino, A. J.: "Thermal Protection of Structural, Propulsion and Temperature-Sensitive Materials for Hypersonic and Space Flight, Part II," WADC Tech Rpt 59-366, Contract No AF 33(616)-6006, Chicago Midway Labs, University of Chicago, Illinois (July 1960)
524. Paine, R. M., Stonehouse, A. J. and Beaver, W. W.: "An Investigation of Intermetallic Compounds for Very High-Temperature Applications," WADC Tech Rpt 59-29, Parts I and II (January and July 1960)
525. Rundell, G.: "Development of Improved Vanadium-Base Alloys for Elevated Temperature Use," Contract AF 33(616)-7288, First Quarterly Progress Rpt., Crucible Steel Co. of America (May-July 1960)
526. Smalley, A. L., Riley, W. C. and Duckworth, W. H.: "Al<sub>2</sub>O<sub>3</sub>-Clad UO<sub>2</sub> Ceramics for Nuclear-Fuel Applications," Amer. Cer. Soc. Bull., 39, No 7, 359-361 (July 1960)
527. Schmidt, F. F.: "Tantalum and Tantalum Alloys," DMIC Rpt 133, OTS PB 151091 (July 25, 1960)
528. Tuzzolino, A. J., Manos, W. P. and Taylor, D. E.: "Thermal Protection of Structural, Propulsion and Temperature-Sensitive Materials for Hypersonic and Space Flight," WADC Technical Rpt 59-366, Part II (July 1960)

529. Annotated "Bibliography on Oxidation and Erosion Resistant Coatings for Molybdenum, Tungsten, and Tantalum, Value Engineering Co. under Contract DA-36-034-ORD-3270D (August 30, 1960)
530. Brown, A. R. G.: Silicon Carbide-A Review, Technical Note Met/Phys., 325, Royal Aircraft Establishment (Farnborough) ASTIA 249685 (August 1960)
531. "Development and Possible Applications of Plasma and Related High-Temperature Generating Devices," Report MAB-167-M, Materials Advisory Board, ASTIA (August 30, 1960)
532. Duffin, H. C.: "A Laboratory Scale Study of Erosion and Deposition Due to Gas Borne Solids," Memorandum No. M. 341, National Gas Turbine Establishment (England), ASTIA 244595 (August 1960)
533. Goldsmith, A., Waterman, T. E. and Hirschhorn, H. J.: Handbook of Thermophysical Properties of Solid Materials, Vol I-Elements; Vol II-Alloys; Vol III-Ceramics; Vol IV-Cermets, Intermetallics, Polymerics, Composites; Vol V-Index. WADC Tech Rpt 58-476, Revised Ed. (August 1960)
534. Lake, T.: "2000 F Creep Properties of W-2 Coated Molybdenum-0.5% Titanium Alloy Sheet," Marquardt Corporation Process Memorandum MPM No. 14.126 (August 29, 1960)
535. Passmore, E. M., Boyd, J. E., Neal, L. P., Anderson, C. A. and Lement, B. S.: "Investigation of Diffusion Barriers for Refractory Metals," WADD Tech Rpt 60-343, WADD Contract No AF 33(616)-6354, Manufacturing Labs Inc., Cambridge, Mass. (August 1960)
536. Shannon, R. D., Bergeron, C. G., Tennery, V. J., Frieberg, A. L. and Maroney, D. M.: "Protective Coatings for Refractory Metals," WADC Technical Rpt 59-526, Part II (August 1960)
537. Wulff, John and Wlodek, S. T.: "Growth of Chromium Coatings from Liquid Metallic Solutions," Trans. Met. Soc. AIME, 218, 716-722 (August 1960)
538. Birks, L. S. and Seibold, R. E.: "Elevated Temperature Diffusion in the System Nb-Pt, Nb-Se, Nb-Zn, Nb-Co, Ni-Ta, and Fe-Mo," NRL Rpt 5520 (September 19, 1960)
539. Joam, Berkowitz: "Stability of Ceramic Materials at Temperatures to 2000 C," WADD Tech Rpt 60-377 (September 1960)

540. Krikorian, O. H.: "Thermal Expansion of High Temperature Materials," UCRL-6132 (September 6, 1960)
541. Margrave, J. L. and Dreger, L. H.: "Vapor Pressure of Platinum Metals, I. Palladium and Platinum," J. Phys. Chem., 64, 1323-1324 (September 1960)
542. Smyth, H. T., Kirchner, H. P. and Merz, K. M.: "An Investigation of the Theoretical and Practical Aspects of the Thermal Expansion of Ceramic Materials," Cornell Aeronautical Laboratory (September 30, 1960)
543. Jones, E. S. and Johnke, L. P.: "Updating High-Temperature Metallurgy," Metal Progress, 78 (4), 131-135 (October 1960)
544. Margrave, J. L., Wang, Ke-Chin, Dreger, L. H. and Dadape, V. V.: "Sublimation of Cr<sub>2</sub>O<sub>3</sub> at High Temperatures," J. Am. Ceram. Soc., 43 (10), 509-510 (October 1960)
545. Michael, A. B. and Lorenz, R. H.: "Oxidation Resistant Silicide Coating for Columbium and Tantalum Alloys by Vapor Phase Reaction," Paper Presented at 118th Meeting of the Electrochemical Society, Houston, Texas (October 9-13, 1960)
546. "Missile Coating Conference," Sponsored by Johns Hopkins University, Bendix Corp., McDonnell Corp., Norton Co. (October 1960)
547. Priest, D. K.: "Corrosion Concepts for Glassed Steel," Amer. Cer. Soc. Bull., 39, No 10, 507-510 (October 1960)
548. "More Refractory Coatings by Electrophoresis," Product Engineering, 8, (October 10, 1960)
549. Rosen, C., Hasapis, A. A. and Panish, M. B.: "The Vaporization and Physical Properties of Certain Refractories. Part I. Techniques and Preliminary Studies," WADD Technical Rpt 60-463, Part I (October 1960)
550. Rummier, D. R., Mathauser, E. E. and Stein, B. A.: "Investigation of Problems Associated With the Use of Alloyed Molybdenum Sheet in Structures at Elevated Temperatures," NASA TN D-447 (October 1960)
551. Shishakov, N. A.: "On the Oxidation of Gold," J. Phys. Chem., 64, 1580 (October 1960)

552. Strott, A. J.: "Designing With Sintered Beryllia," Product Engineering, 65-67 (October 17, 1960)
553. Tarp, A. G. and Searcy, A. W.: "The Dissociation Pressures and the Heats for Formation of the Molybdenum Silicides," J. Phys. Chem., 64, 1539-1542 (October 1960)
554. Tarpinian, A. and Gazza, G. E.: "Etch Pits in Pyrolytic Graphite," Tech Rpt No WAL TR 130.5/1, D/A Project 5B93-32-004, Watertown Arsenal, Watertown 72, Mass (October 1960)
555. Vogan, J. W.: "Thermal Protective Surfaces for Structural Plastics: II," WADD Tech Rpt 60-110, WADD Matls Central Contract No. AF 33(616)-6393, Bendix Prod. Div, South Bend 20, Ind. (October 1960)
556. Aves, W. L.: "Vought Coatings for Molybdenum, Columbium and Tantalum Alloys," Fourth Refractory Composites Working Group Meeting. Cincinnati, Ohio (November 15-17, 1960)
557. Brown, B. F. et al: "Protection of Refractory Metals for High Temperature Service," (November 28, 1960)
558. Francis, R. K. and Tinklepaugh, J. R.: "Thermal Conductivity in Ceramic-Metal Laminates," Jour. Amer. Cer. Soc., 43, No 11, 560-563 (November 1960)
559. Houck, J. A.: "Physical and Mechanical Properties of Commercial Molybdenum-Base Alloys," DMIC Rpt 140, OTS PB 151099 (November 30, 1960)
560. Lad, R. A.: "Survey of Materials Problems Resulting from Low-Pressure and Radiation Environments in Space," NASA TN D-477 (November 1960)
561. Lee, D. W. and Kingery, W. D.: "Radiation Energy Transfer and Thermal Conductivity of Ceramic Oxides," Jour Amer Cer. Soc., 43, No 11, 594-607 (November 1960)
562. Lucks, C. F., Wood, W. D. and Deem, H. W.: "Emissivity and Emittance-What Are They," DMIC Memorandum 72 (November 10, 1960)
563. Morris, J. L., Cox, J. W. and Werner, R. W.: "Oxidation Protection of Columbium-Base Alloys," Paper Presented at Fourth Refractory Composites Working Group Meeting, (November 14-17, 1960)'

564. Allen, J. M.: "Environmental Factors Influencing Metals Application in Space Vehicles," DMIC Rpt 142 (December 1, 1960)
565. Atkins, J. H., Bisplinghoff, R. L., Hamm, J. L., Jackson, E. G. and Simons, J. C., Jr.: "Effects of Space Environment on Materials," WADD Tech Rpt 60-721 (December 1960)
566. Beall, F. W., Myers, R. L. and Canfield, J. J.: "Etching Steel for Adherence of Porcelain Enamel," Amer. Cer. Soc. Bull., 39, No 12, 727-731 (December 1960)
567. Goldschmidt, H. J. "An X-Ray Investigation of Systems Between Niobium Pentoxide and Certain Additional Oxides," Metallurgia, 211-218 and 241-250 (November/December 1960)
568. Hammond, R. A. F. and Williams, C.: "The Resistance to Oxidation of Nickel-Chromium Electrodeposits on Molybdenum," Armament Research and Development Establishment (Great Britain) Memo. No (MX) 89/60, ASTIA 255829 (December 1960)
569. Wiodek, S. T.: "Coatings for Columbium," J. Electrochem. Soc. (February, 1961)
570. Lucks, C. F., Wood, W. D. and Deem, H. W.: "Methods of Measuring Emittance," DMIC Memorandum 78 (December 27, 1960)
571. Pellini, W. S.: "Materials Requirements of Hypersonic Flight Vehicles," J. Metals, 952-963 (December 1960)
572. Shaffer, P. T. B.: "Summary Report on the Development of Ultra Refractory Materials," Contract NOrd- 17175, Carborundum Co. (December 15, 1960)
573. Andrews, A. I.: "Porcelain Enamels," Garrard Press, Champaign, Illinois (1961)
574. Columbium Metallurgy, (D. L. Douglass and F. W. Kunz, Editors,) Interscience Publishers, New York(1961)
575. Goldsmith, A., Waterman, T. E. and Hirschhorn, H. J.: Handbook of Thermophysical Properties of Solid Materials, Vol I-Elements; Vol II-Alloys; Vol III-Ceramics; Vol IV-Cermets, Intermetallics, Polymerics, Composites; Vol V-Index. The Macmillan Co., New York (1961)

576. Kriegel, W. W. and Palmour, Hayne III: "Mechanical Properties of Engineering Ceramics," Interscience Publishers/New York-London, (1961)
577. Rosen, C. L., Hasapis, A. A., Panish, M. G., et al: "The Vaporization and Physical Properties of Certain Refractories," Quarterly Technical Summary Reports under Contract AF 33(616)-6840 (1960-61)
578. Chao, P. J. and Priest, D. K.: "Development of a Cementation Coating Process for High-Temperature Protection of Molybdenum," WADD Contract No AF 33(616)-7192, ARDC, Pfaudler, Co., Rochester 3, New York (January 1961)
579. Withers, James C.: "Electroplated Cermet Coatings for Oxidation Protection of Substrates in Excess of 2000° F.," WADD Technical Rpt 60-718, American Machine & Foundry Co. (January 1961)
580. Abbott, H. M.: "Expitaxial Growth, An Annotated Bibliography," Lockheed Special Research Bibliography SRB-61-7 ASTIA 253404 (February 1961)
581. Aves, W. L., Jr.: "Evaluation and Testing of High-Temperature Oxidation Resistant Coatings on Refractory Metal Substrates," Paper Presented at 2nd Annual Symposium on Non-destructive Testing of Aircraft and Missile Components, San Antonio, Texas (February 14-16, 1961)
582. Inghram, M. G., Grimley, R. T., and Burns, R. P.: "Thermodynamics of the Vaporization of Cr<sub>2</sub>O<sub>3</sub>: Dissociation Energies of CrO, CrO<sub>2</sub>, and CrO<sub>3</sub>," J. Chem. Physics, 34,(2), 664-667 (February 1961)
583. Jaffee, R. I.: "Refractory Metals in Europe," DMIC Memorandum 83 (February 1, 1961)
584. Johns, V. L., and Hayes, G. A.: "An Investigation of the Feasibility of Forming Alloy Coatings With A Plasma Jet," NAVWEPS Report 7616, NOTS TP 2616 (February 2, 1961)
585. Klicker, J. D. and Bomberger, H. B.: "A Study of Controlling High-Temperature Oxidation of Vanadium-Base Alloys," WADD Tech Rpt 60-405 (February 1961)
586. Searcy, A. W., Davis, S. G. and Anthrop, D. F.: "Vapor Pressure of Silicon and the Dissociation Pressure of Silicon Carbide," J. Chem. Physics, 34 (2), 659-664 (February 1961)

587. "Dyna-Soar-A New Technology," Metal Progress, 90-92 (March 1961)
588. Goetzel, C. G. and Landler, P.: "Refractory Coatings for Tungsten," WADD Tech. Rpt 60-825, New York University Research Division (March 1961)
589. Hauck, C. A. and Stetson, A. R.: "Plasma Techniques for Spraying Toxic and Oxidizable Materials," Paper Presented at AIME Symposium on Plasma Arc Applications to Metallurgy, Western Metal Congress (March 23, 1961)
590. Huminik, John, Jr.: "Investigation of Oxidation and Erosion Resistant Coatings on Molybdenum, Tantalum, and Tungsten," Summary Report under Contract DA 36-034-ORD-3270-RD (March 6, 1961)
591. Lucks, C. F., Wood, W. D. and Demm, H. W.: "The Emittance of Titanium and Titanium Alloys," DMIC Memorandum 91 (March 17, 1961)
592. Krier, C. A. and Klopp, W. D.: "Zinc Coatings for the Protection of Columbium from Oxidation at Elevated Temperatures," DMIC Memorandum 88 (March 3, 1961)
593. "Survey of Facilities for Space Environment Simulation," Preliminary Summary ARTC Project 6-60 by Aerospace Industries Association of America, Inc., for Goodyear Aircraft Corp. (March 1, 1961)
594. Walker, D. L., Mash, D. R. and Weare, N. E.: "Process Variables in Plasma-Jet Spraying," Paper Presented at AIME Symposium on Plasma Arc Applications to Metallurgy, Western Metal Congress (March 23, 1961)
595. Walton, J. D. Jr.: "Present and Future Problem Areas for High Temperature Inorganic Coatings," Amer. Cer. Soc. Bull., 40, No 3, 136-141 (March 1961)
596. Wurst, J. C., Rosenberry, J. W. and Smith, H. E.: "Evaluation of Materials Systems for Use in Extreme Thermal Environments Utilizing an Arc Plasma Jet," WADD Technical Rpt 60-926 (March 1961)
597. Bergeron, C. G., Tennery, V. J. and Friedberg, A. L.: "Reaction Studies of Ceramic-Coated Tungsten," Jour. Amer. Cer. Soc., 44, No. 4 156-160 (April 1961)
598. English, J. J.: "Binary and Ternary Phase Diagrams of Columbium, Molybdenum, Tantalum, and Tungsten," DMIC Rpt 152 (April 28, 1961)

599. Gangler, J. J.: "Status and Future of High Temperature Coatings for Refractory Metals," Paper Presented at Technical Conference on High-Temperature Materials, Cleveland, Ohio (April 26-27, 1961)
600. Gleiser, Molly : "Free Energies of Formation of Gaseous Metal Oxides," Trans. Met. Soc. AIME, 221(2), 300-304 (April 1961)
601. Graham, J. W. and Hall, W. B.: "Ceramic Coatings for the Protection of Columbium Alloys," Paper Presented at Technical Conference on High-Temperature Materials, Cleveland, Ohio (April 26-27, 1961)
602. Kutzelnigg, Arthur: "The Porosity of Electrodeposits," Plating, 382-387 (April 1961)
603. Lawthers, D. D. and Sama, L.: "Aluminide and Beryllide Protective Coatings for Tantalum," Paper Presented at Technical Conference on High-Temperature Materials, Cleveland, Ohio (April 26-27, 1961)
604. Lufton, T. C. and Sandoz, G.: "Mechanisms of Formulation and Protection of Columbium-Zinc Coatings on Columbium," Paper Presented at Technical Conference on High Temperature Materials, Cleveland, Ohio (April 26-27, 1961)
605. Macklin, B. A., Withers, J. C. and Schatz, E. A.: "Development of Heat Barrier Coatings," ASD Tech Rpt 61-5, Amer Mach Foundry Co. (April 1961)
606. Rhys, D. W. and Betteridge, W.: "The High-Temperature Oxidation of the Platinum Metals and Their Alloys," Paper Presented at the First International Congress on Metallic Corrosion, London (April 1961)
607. Sayre, E. D., Bamburger, E. N., Frank, R. G. and Luft, L.: "Protection of Columbium Alloys for High-Temperature Service," Paper Presented at Technical Conference on High-Temperature Materials, Cleveland, Ohio (April 26-27, 1961)
608. Wachtell, R. L.: "Coatings for Molybdenum," Paper Presented at Technical Conference on High-Temperature Materials, Cleveland, Ohio (April 26-27, 1961)
609. Clough, P. J. and Raymond, P. L.: "Oxidation Resistant Coatings for Molybdenum and Other Refractory Bodies," Amer. Cer. Soc. Bull., 40, No 5, 314-315 (May 1961)

610. Gadd, J. D. and Jefferys, R. A.: "Development and Evaluation of High Temperature Protective Coatings for Columbium Alloys, Part I Coating Development," ASD Technical Rpt 61-66, Part I (Part II on Comparative Evaluations of Coatings is in Preparation) (May 31, 1961)
611. Genier, J. W., Kramer, B. E. and Levinstein, M. A.: "The Effect of Arc Plasma Deposition of the Stability of Nonmetallic Materials," Final Report under Contract Noas 60-6076-C (April 1960-May 1961)
612. Hahn, G. T. and Jaffee, R. I.: "A Comparison of the Brittle Behavior of Metallic and Nonmetallic Materials," DMIC Memorandum 107 (May 16, 1961)
613. Lewis, J. R.: "Evaluation of Beryllides," J. Metals, 13 (5), 357-362 (May 1961)
614. Lucks, C. F., Wood, W. D. and Deem, H. W.: "The Emittance of Coated Materials Suitable for Elevated-Temperature Use," DMIC Memorandum 103 (May 4, 1961)
615. Mathauser, E. E.: "Standardization of Testing Techniques for Coated Refractory Metals (Langley Res. Center, NASA)," Meeting at Aeronautical Systems Div., Wright-Patterson AFB, Ohio (May 23, 1961)
616. Colton, E.: "Two Boron Silicides," Materials in Design Engineering, 9-10 (June 1961)
617. Cutler, I. B., Jorgensen, P. J. and Wadsworth, M. E.: "Effects of Water Vapor on Oxidation of Silicon Carbide," J. Am. Ceram. Soc., 44 (6), 258-261 (June 1961)
618. Lewis, B. W.: "Investigations of the Deterioration of 22 Refractory Materials in a Mach Number 2 Jet at a Stagnation Temperature of 3800 F.," NAS TN D-906 (June 1961)
619. Lucks, C. F., Wood, W. D. and Deem, H. W.: "The Emittance of Stainless Steel," DMIC Memorandum 111 (June 12, 1961)
620. Magalotti, Harry and Wilks, Charles: "Evaluation of Coating for Molybdenum," Final Rpt under Contract NOw 60-0321c (June 15, 1961)
621. Petrus, H. M. and Fryburg, G. C.: "Kinetics of the Oxidation of Platinum," J. Electrochem. Soc., 108 (6) 496-503 (June 1961)

622. Rosenbery, Joseph W., Smith, Howard E., Wurst, John C.: "Evaluation of Materials Systems for Use in Extreme Thermal Enviroments Utilizing an Arc-Plasma-Jet," WADD Tech. Rpt 60-926, University of Dayton Research Institute (June 1961)
623. Thorpe, M. L.: "Plasma Jet, Progress Rpt 2," Research/Development, 12, No 6, 77-89 (June 1961)
624. Wachtell, R. L. and Spring, A. I.: "New Alloy Aids Missiles," Ordnance, 886-887 (May-June, 1961)
625. Barth, V. D.: "Oxidation of Tungsten," DMIC Rpt 155 (July 17, 1961)
626. Belser, R. B. and Carithers, M. D.: "Reflective Metal Coatings," Proceedings, Coatings for the Aerospace Enviroment, WADD Tech Rpt 60-773 (July 1961)
627. Cappola, V. J.: "Gas Nitriding of Stainless Steel," Metal Progress, 80 (1), 83-84 (July 1961)
628. Flint, E. P.: "Ceramic Coatings for Control of Reflectivity and Emissivity," Proceedings, Coatings for the Aerospace Enviroment, WADD Tech Rpt 60-773 (July 1961)
629. Klopp, W. D.: "Review of Recent Developments on Oxidation-Resistant Coatings for Refractory Metals," DMIC Memoranda (a) 102 and (b) 120 (April 26 and July 31, 1961, respectively)
630. Lucks, C. F., Wood, W. D. and Deem, H. W.: "The Emittance of Iron, Nickel, Cobalt and Their Alloys," DMIC Memorandum 119 (July 25, 1961)
631. Perkins, R. A. and Crooks, D. D.: "Low-Pressure, High-Temperature Oxidation of Tungsten," J. Metals, 13 (7), 490-493 (July 1961)
632. Rasnick, T. A. and Peters, R. W.: "Investigation of Oxidation-Resistant Coatings on Graphite and Molybdenum in Two Arc-Powered Facilities," NASA TN D-838 (July 1961)
633. Dickinson, C., Pranatis, A. and Whitman, C.: "Protection of Tungsten Against Oxidation at Elevated Temperatures," Paper Presented at Fifth Meeting of the Refractory Composites Working Group, Dallas, Texas (August 8-10, 1961)
- 633a. Olcott, E. L., Batchelor, J. D., and Scheffe, R. S.: "Gas Metals Reactions in Rocket Nozzles," Contract Nr AF 33-(616)-7744 (July 1961)

634. Dotson, L. E.: "LB-2 Processing of the McDonnel F-48 Fin-Rudder Components," Paper Presented at Fifth Meeting of Refractory Composites Work Group Meeting, Dallas, Texas (August 8-10, 1961)
635. Huffman, J. W. and Weisman, M.: "Investigation of Protective Coatings for Refractory Metals at North American Aviation, Inc., Los Angeles Division," Paper Presented at Fifth Refractory Composites Working Group Meeting, Dallas, Texas (August 8-10, 1961)
636. Ogen, H. R., Klopp, W. D. and Maykuth, D. J.: "Development of Protective Coatings for Tantalum-Base Alloys," Paper Presented at Fifth Meeting of the Refractory Composites Working Group, Dallas, Texas (August 8-10, 1961)
637. Steinitz, R. and Resnick, R.: "High-Temperature Reactions Between Tungsten and Several Refractory Compounds," Paper Presented at Fifth Meeting of the Refractory Composites Working Group, Dallas, Texas (August 8-10, 1961)
638. Strauss, E. L.: "Recent Martin Investigations of Refractory Composites," Paper Presented at Fifth Refractory Composite Working Group Meeting, Dallas, Texas (August 8-10, 1961)
639. Duckworth, W. H., King, B. W., Blankenship, C. L. and Trip, H. P.: "Properties of Molybdenum Disilicide," BMI-871 (September 25, 1961)
640. Gripshover, P. J., Paprocki, S. J. and Hodge, E. S.: "Gas-Pressure Bonding," DMIC Rpt 159 (September 25, 1961)
641. Krier, C. A.: "Coatings for the Protection of Refractory Metals from Oxidation," DMIC Rpt 162, Battelle Memorial Inst, Columbus 1, Ohio (November 24, 1961)
642. Rechter, H. L. and Bliton, J. L.: "Determination of Physical Properties of Flame Sprayed Ceramic Coatings," Amer. Cer. Soc. Bull., 40, No 11, 683-688, Armour Research Foundation, Chicago, Illinois (November 1961)
643. Bacon, Roger and Sprague, Richard: "Research and Development on Advanced Graphite Materials Vol. III-Decoration of Dislocations and Low Angle Grain Boundaries in Graphite Single Crystals," WADD-TR-61-72, Volume III, Project Nos 7350 and 7381, Task Nos. 735002 and 738102, National Carbon Co., Parma, Contract No. AF 33(616)-6915 (February 1962)
- 643a. Pears, C. D.: "The Determination of the Emittance of Refractory Materials to 5000° F," ASME Symposium on Thermophysical Properties (January 1962)

644. Mazdiyasni, K. S., Connors, C. R. and Pratt, C. A.: "Synthesis and Pyrolysis of Refractory Metal Alkoxides," ASD-TDR-62-90, Project No. 7350, Task No. 735002-A (Graphitic Materials Development), Aero. Systems Div., Wright-Patterson AFB, Ohio (February 1962)
645. Sadownick, E. M.: "Investigation of Materials Capabilities of Material Systems in Solid Rocket Motors. Part II. Analysis of Heat Transfer Factors," WADC TR 59-602, Part II, Project No. 7350, Task No. 73500 Aerojet-General Corp., Sacramento, Calif. (February 1962)
646. Harrison, W. N., Richmond, J. C. and Skramstad, H. K.: "Standardization of Thermal Emittance Measurements, Part III: Normal Spectral Emittance, 800 to 1400° K," WADC-TR-59-510, Part III, Proj No 7360, Task No 73603, Contract No AF 33(616)-61-02, N B S Washington, D. C. (March 1962)
647. Blome, J. C., Nummer, D. L. and Rusert, E. L.: "Hypersonic Glide Vehicle Nose Tip Applications and Oxidation Protection of Graphite at 4000° F," Paper Presented at the 1962 Annual Meeting of the American Ceramic Society, McDonnell Aircraft Corp. (April 1962)
648. Davis, LeRoy, W.: "Plasma-Arc Spraying," Paper Presented at the Annual Meeting 1962 of the American Ceramic Society, Harvey Eng Labs., Torrance, Calif. (April 1962)
649. Herron, R. H.: "Thermal Protective Coatings for Structural Plastics," Paper Presented at the 1962 Annual Meeting of the American Ceramic Society, Bendix Prods. Aerospace Div., South Bend, Ind. (April 1962)
650. Leeds, D. H.: "Studies of the Interface Between Plasma-Sprayed Tungsten Coatings and Substrates of 1020 Steel," Paper Presented at the 1962 Annual Meeting of the American Ceramic Society, Aerospace Corp., Los Angeles, Calif. ( April 1962)
651. Lepie, M. P.: "Pyrolytic Carbides," Paper Presented at the 1962 Annual Meeting of the American Ceramic Society, Raytheon Co., Waltham, Mass. (April 1962)
652. Levy, M.: "Flame-Sprayed Ceramic Coatings: Evaluation and Ordnance Applications," Paper Presented at the 1962 Annual Meeting of the American Ceramic Society, Watertown, Mass. (April 1962)
653. Sklarew, S.: "Reinforced Inorganic Refractory Ceramic Coatings," Paper presented at the 1962 Annual Meeting of the American Ceramic Society, Marquardt Corp., Van Nuys, Calif. (April 1962)

654. Wheeler, W. H.: "Ceramic Radiative Heat Shields," Paper Presented at the 1962 Annual Meeting of the American Ceramic Society, Martin Marietta Corp., (April 1962)
655. Krier, C. A., Jaffee, R. I., and Douglass, R. W.: "High Temperature Properties and Alloying Behavior of the Refractory Platinum-Group Metals," (Summary Report in preparation under Contract Nr.- 2547 (00), Nr. 039-067)
656. Jaffee, R. I., Klopp, W. D., Maykuth, D. J. and Ogden, H. R.: "Development of Protective Coatings for Tantalum," Contract AF 33(616)-7184, Final Report due to be published in near future.
657. "Development of High-Temperature Oxidation Resistant Protective Coatings for Vanadium-Base Alloys," Current Contract N0W-61-0806-c at Armour Research Foundation for Bureau of Naval Weapons.

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